

PALESTINE EXPLORATION FUND.

ANNUAL

1914-1915.

DOUBLE VOLUME.

PUBLISHED BY ORDER OF THE COMMITTEE,

AND SOLD AT

THE OFFICES OF THE FUND, 2, HINDE STREET, MANCHESTER SQUARE, W.

PALESTINE EXPLORATION FUND.

ANNUAL

1914-1915.

DOUBLE VOLUME.

PUBLISHED BY ORDER OF THE COMMITTEE,

AND SOLD AT

THE OFFICES OF THE FUND, 2, HINDE STREET, MANCHESTER SQUARE, W.

PALESTINE EXPLORATION FUND,

1914.

THE WILDERNESS OF ZIN

(ARCHÆOLOGICAL REPORT.)

By

C. LEONARD WOOLLEY

and

T. E. LAWRENCE.

With a Chapter on the Greek Inscriptions by M. N. TOD.

PUBLISHED BY ORDER OF THE COMMITTEE

AND SOLD AT

THE OFFICES OF THE FUND, 2, HINDE STREET, MANCHESTER SQUARE, W.

HARRISON AND SONS,
PRINTERS IN ORDINARY TO HIS MAJESTY,
ST. MARTIN'S LANE, LONDON.

THE PALESTINE EXPLORATION FUND.

PATRON—THE KING.

President—HIS GRACE THE ARCHBISHOP OF CANTERBURY.

Vice-President—HIS GRACE THE ARCHBISHOP OF YORK.

Hon. Treasurer—WALTER MORRISON, ESQ.

Hon. Secretary—J. D. CRACE, ESQ., F.S.A.

Editor—STANLEY A. COOK, ESQ., M.A.

Hon. General Secretary for U.S.A.—REV. PROFESSOR LEWIS B. PATON, PH.D.

Hon. General Secretary for Palestine—E. W. G. MASTERMAN, ESQ., M.D., F.R.G.S.

EXECUTIVE COMMITTEE.

Chairman—COLONEL SIR CHARLES M. WATSON, K.C.M.G., C.B., R.E., M.A.

REV. ARTHUR CARR.	LEONARD W. KING, ESQ., M.A., F.S.A.
J. D. CRACE, ESQ., F.S.A.	PROFESSOR A. MACALISTER, F.R.S., LL.D.
REV. CANON DALTON, C.V.O., C.M.G.	WALTER MORRISON, ESQ.
PROFESSOR A. C. DICKIE, M.A., F.S.A.	PROFESSOR W. M. FLINDERS PETRIE, D.C.L., LITT.D., LL.D., PH.D., F.R.S.
SIR ARTHUR EVANS, D.LITT., LL.D., M.A., F.R.S., F.S.A.	W. H. RYLANDS, ESQ., F.S.A.
C. D. GINSBURG, ESQ., LL.D.	REV. PROFESSOR SAYCE, D.D., LL.D., D.LITT.
J. W. L. GLAISHER, ESQ., SC.D., F.R.S.	COLONEL SIR HENRY TROTTER, K.C.M.G., C.B., R.E.
REV. PROFESSOR GEORGE BUCHANAN GRAY, D.D., D.LITT.	GENERAL SIR CHARLES WARREN, G.C.M.G., K.C.B., F.R.S., R.E.
COLONEL W. C. HEDLEY, R.E.	PERCY D'ERF WHEELER, ESQ., M.D., F.R.C.S.E., F.R.G.S.
D. G. HOGARTH, ESQ., M.A., F.B.A., F.S.A.	
REV. R. F. HORTON, D.D.	

TO CAPTAIN S. F. NEWCOMBE, R.E.

Who showed them "the way wherein they must walk, and the
work that they must do."

PREFATORY NOTE.

The Committee of the Palestine Exploration Fund feel it necessary to state that both the principal authors having been called to Egypt, for Special Military Service, before the end of the year 1914, Mr. D. G. Hogarth kindly undertook to see this volume through the Press. He wishes it to be understood that he has written none of it except a paragraph on the Hora pottery (p. 48); that the transliteration of Arabic names and words, and the arrangement of the matter are the authors' own; and that he has not been able to assign with complete confidence their places in the text to the following illustrations, Figs. 1; 2; 26 *c, d, f, g*; 29; 31; 43; 45; 46.

The book (except Chapter VI) has been produced jointly by the authors; but the following parts of the text are more the work of one than of the other. Mr. Woolley is chiefly responsible for the first half of Chapter I; the sections on stone implements and monuments, climate, and the Byzantine period in Chapter II; the account of the Northern Tells in Chapter III; and all Chapter V, except the concluding section.

Mr. Lawrence is chiefly responsible for the second half of Chapter I (on Akaba); the first part of Chapter II; the account of the Darb el Shur in Chapter III; most of Chapter IV; and the concluding section only (Akaba) of Chapter V.

The maps in the book were compiled by Mr. Lawrence from the Survey materials and drawn out by Mr. B. V. Darbishire. The plates are from photographs taken by both authors. The plans and drawings reproduced in the text are, almost without exception, the work of Mr. Woolley, who drew them to scale on the spot.

The Committee feel deeply indebted to Mr. Hogarth for the care and labour devoted to the production of the work, for which task none could be better equipped by knowledge and experience.

C. M. WATSON,
Chairman of the Executive Committee.

February, 1915.

CONTENTS.

	PAGE
INTRODUCTION	xiii
CHAP. I. OUR ROUTE	3
Gaza : Beersheba : Khalasa : Esbeita : Auja : Ain Kadeis : Ain el Guderat. We divide : Khoraisha : Abda : Kurnub : Northern Tells : Gaza. Ain el Guderat to Kuntilla : The Nagb of Akaba : Wady Araba : Ain Ghadian : Gharandel : Wady Musa and Maan.	
CHAP. II. THE HISTORY OF THE SOUTHERN DESERT	15
Physical characteristics : An inhospitable desert : The stones of it : The hills and valleys : Floods : Shrubs : Climate : Lack of written records : Permanence of material remains : Flint implements : Stone circles and cairns : many varieties : their classification and chronology : at Kossaima : at Ain el Guderat : on Tell el Seram : at Muweilleh. Dwelling-house ruins : at Muweilleh : Guderat : Raheiba : Bir Birein : Akaba. The Nabatean period : Abda : Khalasa. The Byzantine period : Increase of population : Wealth : Trade routes : Fortresses : The religious elements : Churches : Monasteries : Agriculture : Rainfall : not more than to-day, judging from the state of early remains, lack of timber and lime-mortar in Byzantine houses, cisterns, and corn stores, wells at Khalasa, Raheiba, Auja, tamarisk-hedges, and extent of plough-land. The fall of Byzantine civilization. Sinai during the Crusades and to-day.	
CHAP. III. THE DARB EL SHUR AND THE NORTHERN TELLS	39
North Sinai a thoroughfare : Holland finds a road from Egypt to Muweilleh and between Hebron and Beersheba : Khalasa : An early fort at Raheiba : A cistern : Wells at Bir Birein : A fort there also : Ras Seram : Muweilleh.	
THE NORTHERN TELLS	44
Abu Hareira : Abu Irgeig : Tell el Seba : Tell el Sawa : Khirbet el Watan : Khirbet Hora : Tell el Milah : Imshash el Milah.	

	PAGE
CHAP. IV. AIN KADEIS AND KOSSAIMA	52
i. <i>Ain Kadeis</i> .—Conformation of the district: The two “plains”: Notoriety of Ain Kadeis: Visitors: Trumbull’s description: Our opinion on it: The springs, grass, fig-trees, bathing pool.	
ii. <i>Muweilleh and Kossaima</i> .—The Kossaima plain: Ain Muweilleh: Kossaima.	
iii. <i>Ain el Guderat</i> .—Wady el Ain: Wady Ain el Guderat: The aqueducts: The great reservoir: The <i>tell</i> : The spring.	
iv. <i>The Antiquities of the District</i> .—At Ain el Guderat: The Arab remains: Byzantine things: A reservoir: A village. Roman pottery: The early period: The tell: Its plan: Pottery: Early graves: Kossaima: Muweilleh huts.	
v. <i>The Kadesh-Barnea question</i> .—Not proven.	
CHAP. V. THE BYZANTINE TOWNS	72
Esbeita: Zephath and Hormah: Mishrafa: Abda: Beersheba: Khalasa, Saadi: Raheiba: El Auja: Kurnub: Akaba: Geziret Faraun.	
CHAP. VI. THE INSCRIPTIONS	133
Greek: Nabatean: Arabic.	

LIST OF ILLUSTRATIONS.

PLATES.

Plate	I.	(1) Between Beersheba and Khalasa. (2) Wady el Khalasa.
„	II.	(1) Wady Issad, showing tamarisk hedges of the Byzantine fields of Khalasa (2) Jebel Araif el Naga from west.
„	III.	(1) Nagb el Akaba. (2) Geziret Faraun.
„	IV.	(1) Ain Gharandel. (2) Cairn at Tell el Seram.
„	V.	(1) Tomb at Tell el Seram before excavation. (2) Same tomb at Tell el Seram after excavation.
„	VI.	(1) Old tomb at Kossaima. (2) Modern Tomb at Kossaima.
„	VII.	(1) Tell el Kasr el Raheiba. (2) Darb el Shur above Bir Birein.
„	VIII.	(1) Byzantine cistern on Darb el Shur near Bir Birein. (2) Bir Birein.
„	IX.	Darb el Shur below Jebel Mushrag.
„	X.	Wady Ain Kadeis, looking up the valley over the watering place.
„	XI.	(1) Ain Kadeis : spring and rivulet. (2) Ain Kadeis : the spring.
„	XII.	(1) Ain Kadeis : the wild fig-trees. (2) Ain Kadeis : a furnished grave.
„	XIII.	Wady Ain el Guderat : the tell in the valley.
„	XIV.	(1) Wady Ain el Guderat, east. (2) „ „ „ west.
„	XV.	Ain el Guderat.
„	XVI.	(1) Mishrafa. (2) Esbeita.
„	XVII.	(1) Esbeita : the Reservoirs. (2) „ „ „
„	XVIII.	(1) Esbeita : N. Church from west. (2) „ „ „ fortified postern.

Plate	XIX.	(1) Esbeita : Central Church and Monastery.
		(2) „ South Church.
„	XX.	(1) Esbeita : Private House.
		(2) „ Wall, showing construction.
„	XXI.	Esbeita : vaulting and ceiling.
„	XXII.	(1) Esbeita : House with upper storey.
		(2) „ Terrace-wall in a valley.
„	XXIII.	(1) Khoraisa : Rock-cut cistern.
		(2) Abda : Castle interior.
„	XXIV.	(1) „ Tell with graves.
		(2) „ Castle from south.
		(3) „ Castle, North Gate.
		(4) „ Capital from North Church.
„	XXV.	(1) Abda : Castle, S.E. angle.
		(2) „ Baths ; domed room.
„	XXVI.	(1) Beersheba : Font.
		(2) „ Statuette.
„	XXVII.	(1) Beersheba : Inscription.
		(2) „ Byzantine Capitals.
„	XXVIII.	(1) Raheiba from a church tower.
		(2) „ reservoir.
„	XXIX.	(1) El Auja : Castle.
		(2) „ Church.
„	XXX.	(1) Wady Kurnub.
		(2) Kurnub : Great Dam.
„	XXXI.	(1) Kurnub : Town.
		(2) „ Capital and voussoirs.
„	XXXII.	(1) Roman blockhouse below Nagb el Safa.
		(2) Nagb el Safa.
„	XXXIII.	(1) Rock-cut cistern in Wady Deira.
		(2) Typical Chalk Country.
„	XXXIV.	Greek Inscriptions I.
„	XXXV.	„ „ II.
„	XXXVI.	„ „ III.
„	XXXVII.	„ „ IV.

MAPS.

[illegible]

ILLUSTRATIONS IN THE TEXT.

		PAGE
Fig. 1.	Semicircular shelter between Beersheba and Khalasa	21
" 2.	Rectangle and ring on Jebel Mushrag	26
" 3.	El Kasr el Raheiba	41
" 4.	Bir Birein : Rock reservoir	42
" 5.	" Building on hill-top	42
" 6.	" Early building on hill-top	43
" 7.	Tell Milah : Fort	50
" 8.	Ain el Guderat : Fort	65
" 9.	Esbeita : Town plan	74
" 10.	" House IV	75
" 11.	" House V	76
" 12.	" House VI	76
" 13.	" North Church : Capital of side door	79
" 14.	" " " Plan	82
" 15.	" " " Capital in Loggia	84
" 16.	" " " Head of post	84
" 17.	" Central Church : Plan	85
" 18.	" " " Pilaster head	86
" 19.	" " " "	86
" 20.	" " " Bracket	86
" 21.	" " " Column drum	87
" 22.	" South Church : Plan	88
" 23.	Mishrafa : Church	92
" 24.	Abda : Upper Town plan	94
" 25.	" Fortress and Monastery : Plan	<i>to face</i> p. 95
" 26.	" North Church : Architectural members	98
" 27.	" Rock Tomb	100
" 28.	" Carved lintel	100
" 29.	" Carved jambs	100
" 30.	" Stela	101
" 31.	" Carved capital	101
" 32.	" Moulded String-course	101
" 33.	" South Church : Details of screen door	102
" 34.	" " " Inscription	103
" 35.	" Isolated building	104
" 36.	" " " capital	104
" 37.	" Building on hill-top	105

	PAGE
Fig. 38. Abda : Baths	105
„ 39. „ Greek graffito	106
„ 40. „ Well house	106
„ 41. „ Greek graffito	106
„ 42. Beersheba : Balustrade and post head	107
„ 43. „ Font	108
„ 44. Khalasa : Town plan	109
„ 45. „ Capitals	110
„ 46. „ Capital	111
„ 47. Saadi : Building and capital	112
„ 48. „ Capital	113
„ 49. Raheiba : Town plan	114
„ 50. „ Architectural carvings	115
„ 51. „ Columns and capitals	116
„ 52. El Auja : Town plan	118
„ 53. „ Monastery church plan	120
„ 54. „ Capital	120
„ 55. Kurnub : Town plan	124
„ 56. „ East Church plan	126
„ 57. „ West Church plan	126
„ 58. „ „ „ architectural members	127
„ 59. Khalasa : Nabatean Inscription	146

INTRODUCTION.

WE must begin with apologies. Mr. Woolley and I are not Semitic specialists, and our hurried flight across the country did not give us either time or opportunity to collect place-names. We therefore deal simply with the archæological remains in the desert, and even on these, from pressure of work elsewhere in Syria, we could only spend six weeks. When we went to Sinai we learnt for the first time the names of former travellers; and in our ignorance of how much they had done, we repeated a great deal of their work, especially on the later sites. French, German, American and English travellers had recorded all these before us. What certain of those travellers have published is usually more than sufficient, and the limited public interested in Byzantine matters will naturally refer to their special articles. As a rule, we have avoided making infinitesimal corrections in their plans or notes, and have put forward only fresh information or criticisms which we think pertinent. If these latter are sometimes drastic, we must plead that our knowledge of pottery, acquired during some years of excavation in the neighbouring countries, and our experience of the allied remains in Egypt and Syria have enabled us to take a wider comparative view of the civilization of the Negeb than most of our predecessors could. We both speak Arabic easily.

On the whole, the work done by the French fathers in this country and published by them from time to time in the *Revue Biblique*, seems

OUR
FORERUNNERS. to us at once very sane, very interesting, and very exact. Their notes on Abda, so far as they go, are admirable. Their description of their ride from Nakhl to Kadeis and through Wady Jerafi to Petra could not be improved upon; and on more particular points, as in their description of Graye (Geziret Faraun), or in their historical and anthropological notes on the Arab tribes, they show the learning of specialists tempered with mercy. Musil, their Austrian competitor, has made wonderful collections of Arab songs, mostly from the Kerak district, and he has been over the whole country, surveying and photographing; but his field notes are sometimes both vague and heavy.

In English there is occasional work, of very varied quality, in the Quarterly Statements of the Palestine Exploration Fund. The field notes of Mr. Holland are of interest between the Canal and Jebel Muweilleh, and he was a keen observer; but his excursions into archæology are not successful. The really great man is Professor Edward Palmer, who, aided by Tyrwhitt Drake, made a journey in the Tih and Negeb in 1869 and 1870. His book is a very carefully written, very lively and very complete summing up of the features of the country. Palmer was a great linguist, and therefore particularly interested in place-names. His zest for these sometimes led him astray. If he had had an archæological instinct or training, our visit to the Desert would have been waste of time. As it was, he was afraid to be too definite in his judgments, and so laid himself open to misuse or misquotation by champions of private and particular theories upon the country and its occupation. His book should be read in conjunction with our own, for we have avoided, where possible, allusion to things which he has done once and for all.

Where we have had occasion to criticise his work or attack his theories we have done it vigorously; but we hope that people will not read into our attitude anything more than the respect due to a powerful opponent; for Palmer himself and for the journey that he and Tyrwhitt Drake, under great difficulties, made so vivid and fruitful for us, we have nothing but unqualified admiration.

The main objects that we had in view were four: to get some idea of the character of the country in successive periods; to trace the Darb el Shur, the old inland route of caravans from central Palestine to Egypt; to identify sites mentioned in the Bible and other historical writings; and, though this lay outside the limits of the new survey, to study the neighbourhood of Ain Kadeis, supposed to be the Kadesh-Barnea of the Israelite wanderings. In all these endeavours, except, perhaps, the third, we had some measure of success. If a disproportionate amount of our results is devoted to Byzantine instead of to earlier and more interesting remains, it is because we were obliged to deal with the actual rather than with the desirable. The identification of old sites of the Bible, so frequent in the former survey of Palestine, was there made possible by the careful collection of place-names. In our haste we could not enter upon this work. It has been very completely done, however, by the actual surveyors, and it is their opinion that in this desert country, subjected to the fluctuating waves of nomad invasions, old names are little likely to survive.

Places are usually called after some temporary and recent inhabitant, or after some prominent but not always permanent natural feature.

THE ATTITUDE
OF THE
ARABS. In the beginnings of our journey, we were aided (in common with the other surveyors) by Erfan Bey, Kaimmakam of Beersheba. He was free from the widespread suspicion of map-makers, and was very friendly. With the Arabs we had the best relations throughout. Of course, each tribe has a vile opinion of the virtues and morals of its neighbours ; but Captain Newcombe began work in the country by getting to know the chiefs, and so secured for himself and the other members of the survey—without paying blackmail or giving presents—a toleration that became cordiality at times. The tribesmen we met were naturally inquisitive and sometimes distrustful, since we did not always follow the lines of the survey parties. But they were all very good-tempered, quite ready to act as guides or emergency helpers (of course, expecting a reward—a frame of mind not unknown in Europe), very hospitable, and most scrupulously honest. Near Ain Kadeis, where our riding camels strayed away, the Arabs brought them in, unasked, to the station at Kossaima. It will be obvious from this that we had no dragoman with us.

We must beg from our critics (if there are any critics in these busy days) more mercy than we ourselves have shown. The original scheme of this book has suffered many things in execution. It was to have been rounded off by some chapters from Captain Newcombe, to treat of place-names and of the histories of Arab tribes, and to explain the triangulation of the actual survey and its results. None of these chapters was written, but all were in preparation when the outbreak of war changed Captain Newcombe's plans, and hurried him into France in the first days of the campaign.

As there is none of Captain Newcombe's independent work in the following pages, I think we shall be justified in saying a few words about his leadership of our party. We were sent down in the midst of his work (which was being done against time) to bother him on a subject that furthered his own studies in no way. We had with us only a scratch outfit raked up in Gaza. Yet he welcomed us, stripped himself of what he called his "luxuries" for us (and he was already living in the barest way), got us camels, and in Khalasa fed us till our stores arrived. Living with him we got a clear insight into his methods. He had five parties under him, and yet in this unmapped wilderness always knew exactly where each party was, and how its work was going on. He established a regular post, and supply caravans from El Arish,

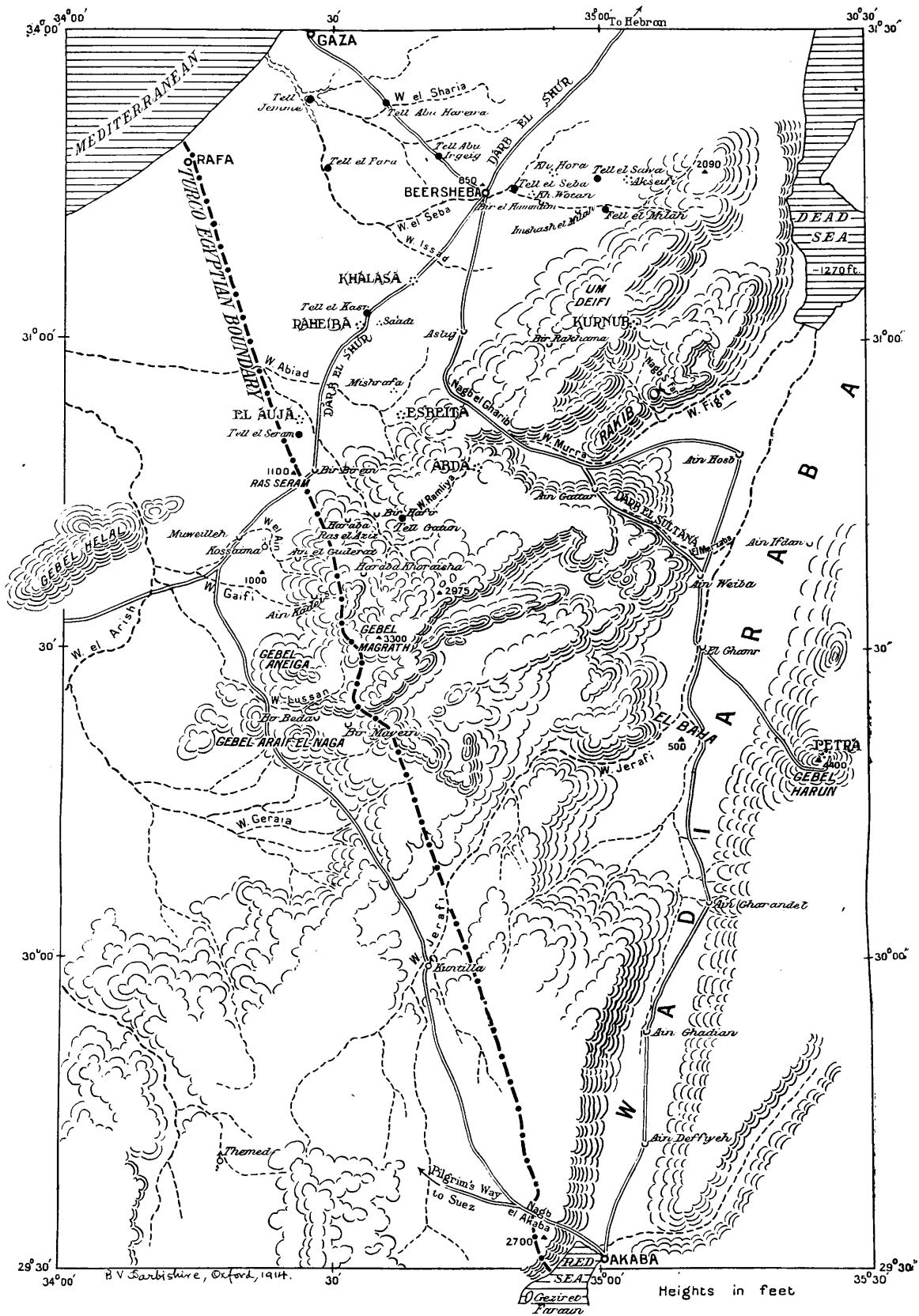
Gaza, and Beersheba, to feed his men and animals. He was ambassador for all of us to Arab tribes and to Turkish officials, and managed both, leaving behind him a reputation which will smooth the way of any future English traveller in the desert. This labour of organization would have been enough for most men, living as roughly and uncomfortably as Newcombe did: yet in addition he contrived to map a larger district than any of his assistants. Off by dawn with guides and instruments, he would return to camp at dark, and work perhaps till midnight, arranging and calculating and recording for the benefit of the other parties. He was the prime begetter of the Survey, and thanks to his elaborate camel-contract, his skilful handling of his transport and supply columns, and the Spartan simplicity of life to which he also converted his subordinates, the expedition, in economy of money and time, beat all records of similar surveys in the East.

This book as it stands, therefore, is the work only of Mr. C. L. Woolley and myself. Mr. Woolley had written of the Byzantine towns, the Northern tells, and the journey, when the war sent him also into the Army, and forced him to transfer his materials to me. These included parts of the historical chapter, and parts of that on the Darb el Shur. It is, however, impossible for either of us to take sole responsibility for any part. Some of the book is a transcript of field notes, hammered out between us in the evening in the tents. Some of it was written in collaboration at Carchemish, before the excavations there began in the spring. In Mr. Woolley's absence I have revised parts of his work where I was competent to do so, and have left it untouched elsewhere.

Dr. A. E. Cowley, of Magdalen College, Oxford, worked out such Hebrew and Nabatean fragments as we brought back. He is responsible here for the Nabatean inscription from Khalasa, printed in Chapter VI. Mr. M. N. Tod, of Oriel College, has done the Greek inscriptions, and has prepared for publication all those given in Chapter VI, and Professor D. S. Margoliouth, of Oxford, has translated the Arabic stone from the Nagb of Akaba given in the same chapter. I owe thanks also to Mr. D. G. Hogarth, who read the text, and improved it in many details, and to Professor A. S. Hunt, of Oxford.

T. E. L.

Map I.



ruined towns ∴ *other ruins* ∴ *Police posts* ○ *Mounds* ● *Wells, springs & cisterns* U *Main roads* ===

PALESTINE EXPLORATION FUND.

CHAPTER I.

OUR ROUTE IN THE DESERT.

If ye go thyder, ye must consider,
When ye have lust to dine,
There shall no meat be for to gete
Nether bere, ale, ne wine,
Ne shetès clean, to lie between.

Gaza: Beersheba: Khalasa: Esbeita: Auja: Ain Kadeis: Ain el Guderat. We divide:
Khoraisha: Abda: Kurnub: Northern Tells: Gaza. Ain el Guderat to Kuntilla: The
Nagb of Akaba: Wady Araba: Ain Ghadian: Gharandel: Wady Musa and Maan.

WE left Carchemish in the last days of 1913, hurrying southwards to join Captain Newcombe, the director of the Survey, who had already been for some time in the field. We brought with us from Carchemish one of our own followers, Dahoum, an Arab boy accustomed to the work of photography, squeezing-making, etc., and we had also the services of Yusuf Canaan, an old foreman of the Palestine Exploration Fund's field work.* We reached Gaza early in January, 1914, and found ourselves obliged, owing to circumstances we could not control, to provide ourselves there with the outfit necessary for the trip. Gaza to-day is not exactly an emporium, and for helping us in our necessities we owe a deep debt of gratitude to the Rev. Dr. Sterling, and to Mr. A. A. Knesevich (British Consular Agent) and his son Emil. Both gave us hospitality and active aid. Mr. Knesevich and his son acted as agents for us, found us servants and stores and tents, and

* Yusuf actually joined us at El Auja, and proved very useful.

throughout our expedition were of the greatest possible help.* Thanks to these gentlemen we were able to leave Gaza on January 7th, the day after our arrival there, for Beersheba, where Captain Newcombe had arranged to meet us.

From Gaza the track to Beersheba passes through a wide undulating plain of deep, rich soil ; there are no trees, and virtually no houses to be seen, but everywhere there are visible the traces of an older and more settled civilization—village sites strewn with Byzantine pottery, olive presses built of marble and cement, and broken water-cisterns.

THE START. A little way from the road, on the west bank of the Wady Sharia, rises Tell abu Hareira, a splendid mound, partly natural and partly artificial, now crowned by a shrine of the saint, and covered with Arab graves. Further to the south Tells Fara and Jemme can be seen in the distance, and nearer to Beersheba, on the bank of the Wady abu Irgeig, a small double tell close to the roadside bears witness to the early occupation of these fertile lowlands. At Beersheba we spent three days, and then, on January 11th, moved to Khalasa. South of Beersheba the country changes, and the rolling plain gives place to barren hills and ridges of soft limestone, overlaid with loose gravel and flint ; some of the wider valleys are cultivated for catch crops, but the general effect of the country is desolate, though the broken terrace walls in even the narrowest wadies are evidence of a more industrious husbandry in the past. As one approaches Khalasa (Plates I, 1, 2, and II,

KHALASA. 1), the stony hills are exchanged for wide sand-dunes dotted with scrub, the country becomes flatter and less broken, and near the ruins of the town stretches a wide plain of light but good soil, a considerable part of which is tilled by the Arabs, whose cluster of tents stands near the well. At Khalasa we stopped four days, visiting in that time Raheiba and Saadi, and also making an excursion back towards the north to examine some of the cairns that top most of the stony hills between the sand-dunes and the Beersheba plain. On January 16th we moved our camp to Esbeita. After following the Saadi road for about half its length, we turned southwards, and, passing over a fairly wide plain, came to a great belt of drift-sand, whose long, regular ridges, from forty to fifty feet high, we had to cross at right-angles. Here cultivation was impossible—only a few

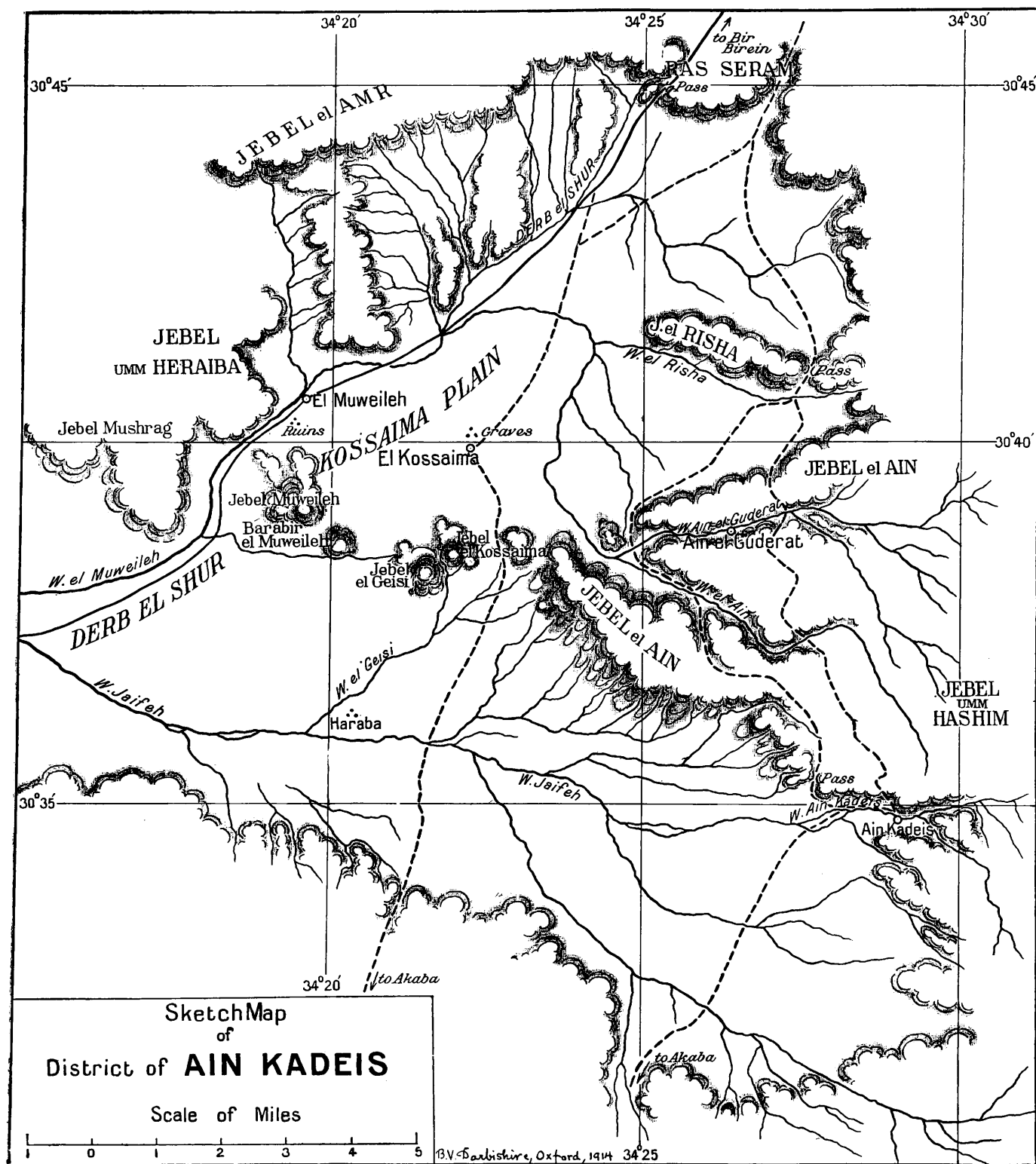
* The words of Antoninus of Placentia (§ 33, *Corp. Script. Eccl. Lat.*, vol. 38, p. 211)—“Gaza autem civitas splendida deliciosa homines honestissimi omni liberalitate decori amatores peregrinorum”—apply only to the staff or buildings of the C.M.S. Hospital and the British Consular Agency. Elsewhere Gaza shows a falling off.

tamarisk bushes pushed up through the sand. From this we passed to a country not less barren—rough limestone hills, banded with flinty strata, which rose gradually on either side of the little valley up which we rode, until at the top of the watershed the ground fell away suddenly before our feet, and we stood looking over the great Wady Migrih. To our right the walls of Mishrafa crowned the highest hill-top on the west side of the valley; on its east side, in the distance, the ruins of Esbeita could just be distinguished. The valley was wild and barren: red ridges of flint rose between stretches of scrub-dotted sand; below Mishrafa a few patches of poorly cultivated

soil but threw into relief the hopeless character of the surrounding desert. By the evening we reached Esbeita, and pitched our camp close to the northern church. The planning of the ruins and a visit to Mishrafa occupied us until January 24th, when we shifted camp to El Auja. The road took us across the flint mounds of the valley, and up the Wady Abiad, a fairly wide plain of sandy, but good soil, once all cultivated, through which the torrent has cut many winding channels with steep banks, and stony, scrub-covered beds. In the middle of the valley was a group of walled gardens, together with the ruins of some five or six stone towers. Then the hills closed in on either side and, by the time we had ridden for seven miles, rose almost directly out of the stream bed. On the hills, long saddles or cone-shaped mounds of flint-strewn limestone, were to be seen numerous cairns and stone piles. The valley widened again, and between the low shelves of rock that now edged it patches of cultivation reappeared, the salvage of the prevailing sand-dunes. In the rock face was cut a large Christian tomb. We left the wady and rode west-south-west over flat land which, though sand-covered, was plainly fit for tillage, then crossed a wady and, cutting across the Darb el Shur, climbed a long, steep ridge of limestone that shut off this plain from the Wady Hafir. Soon a steep descent took us down into the Wady Hafir, a broad valley once fertile, but now given over for the most part to scrub and drift sand, on the further side of which were the ruins of El Auja and the modern Government station—the only buildings to be found between Beersheba and Akaba.

We spent two days planning the town buildings and examining some stone cairns upon Tell el Seram, an isolated hill which rises up boldly in the middle of the wady some three miles south of El Auja. Then, on January 27th, sending our baggage camels on ahead, by the direct route for

Map II.



ERRATA.—Derb el Shur should be Darb el Shur.
Muweileh should be Muweilleh.

Ain Kadeis, we struck eastwards, and hitting the Darb el Shur, where we had crossed it two days before, followed it southwards to Bir Birein, where we found an early building on the hill-top, and thence on to Ras Seram, a stony pass looking over the plain across which runs the Kossaima road. Going straight on, we missed our baggage animals (which had taken the Kossaima road), and had to spend the night in the open ; on the next day we secured a guide and went straight for Ain Kadeis. The fact that our two camels had bolted in the night proved to be rather an advantage, for the tracks which we followed were almost impossible for camels. We climbed up and down steep scree-covered hills rising about a thousand feet above narrow wadies ; nowhere was there any cultivation, nor the possibility of any ; it was the most impressive mountain landscape, and the most barren that we had seen since leaving Gaza. Only in one place did we find a group of five Arab tents close to a water-hole dug in the wady bottom ; elsewhere there were no signs of any inhabitants. We crossed the upper reaches of the Wady Guderat and the Wady el Ain, reached Ain Kadeis at about 1.30 p.m., and

finding that our tents were not there turned northwards,
 AIN KADEIS. and passing along the broken foothills that skirt the Ain Kadeis plain reached, about 5 p.m., the Egyptian Government station of Kossaima. From Kossaima we visited Muweilleh and Ain Kadeis ; and then moved our camp to the pleasant Ain Guderat valley. Here we spent some days, examining the ruins on the little tell, some graves in the wady, and the main features of the surrounding country. On February 8th we separated, Mr. Lawrence to go south to Akaba and thence up the Wady Araba, I to return north. My road led me up the Wady Guderat and then over a ridge up another small wady called Wady el Ain, but really a north-eastern branch of the main valley of that name. This was a narrow flat wady, carefully terraced ; about the middle of it stood the ruins of a small Byzantine hamlet, about a dozen houses, close to a big rock-cut cistern now blocked with stones and rubbish. The cultivation continued to the watershed, the high tableland that flanks the Wady Khoraisha ;

on a low hill-top close to the path were some twenty large
 KHORAISHA. cairns. The Wady Khoraisha where I crossed it is fairly wide, and the flat banks show signs of former cultivation ; higher up steep slopes and rocky cliffs close in on it, broken by the mouths of tributary valleys in which occasionally fair-sized trees can be seen clinging precariously to the stones. In the cliff sides are caverns

roughly walled up and used by the Arabs as corn stores. Further up, the wady passes close to the bare sides of Jebel um Hashim; then a climb over a steep rocky path, worn almost as smooth as glass by the feet of camels, leads one to the *haraba*, a large rock-cut cistern which is one of the few water supplies available in the barren wilderness of the Negeb (Plate XXIII, 1). Half a mile away, in a tiny wady, is a patch of once cultivated land, with the ruins of a rather large Byzantine building, perhaps a khan used by the travellers on this inhospitable road. On this occasion, however, I turned northwards down the wady, and after some five miles passed a little settlement of half a dozen Arab tents; the wady then opened out into a fairly broad plain, parts of which are ploughed by these Arabs, and I camped for the night close to the *haraba* Ras el Aziz, on which they depend for their water. On the next day, turning eastwards, I passed one or two ridges and struck the Wady Hafir, here a broad level plain, once all under cultivation, and crossing it diagonally reached the Bir el Hafir, a shallow stone-lined well in the middle of the stream bed. More stony ridges led to the Wady el Gatun, a complex of small torrent beds of which one was more conspicuous than the rest; in this, and in some of the other wadies, where there was a patch of level ground, terrace walls had been built and the land tilled. On a slight mound (Tell Gatun) were the ruins of three or four Byzantine farms; farther on, another larger building of the same date looked down over the main wady, and on the south side of our road were two or three other houses of the same uncut rubble construction and a few contemporary graves. After more stony ridges I came out on the watershed, a wide plateau of arable soil, from which the road led down a cultivated wady running almost due north, perhaps two miles long, and on the average fifty yards wide. This brought us to the Wady Ramliya. Though broken terraces spoke of former cultivation, the soil was practically pure sand, through which torrent waters had cut a deep bed. It was curious to see here, reproduced on a small scale, the phenomenon remarked by Sir Aurel Stein in Chinese Turkestan: many fragments of walls are left standing on isolated tongues or islands of sand some six feet high, while around them the light soil, not solidified by any superimposed weight, has all been carried away by the flood. At one point on the west bank stood the ruins of a large farmhouse with caves behind it cut in the lofty cliff; fragments of Syrian *terra sigillata* showed that the building dated back fairly early in the Roman period. For some two miles below this the valley is still cultivated; hedges cross it at frequent intervals, and there are even three or four old

trees. Lower still the modern cultivation stops, but the signs of the old are more striking: carefully built terrace walls of ashlar masonry six feet high border the torrent bed, and cross walls run at all angles to disperse the flood-water. Cutting across a high shoulder of the west bank, I came out on rolling country, and looking across a fresh bend of the Wady Ramliya
 ABDA. saw the hill of Abda pockmarked with the black mouths of its ruined cave dwellings.

I left Abda on February 15th, and crossing Wady Ramliya close to the town climbed down and up the sides of Wady Murra, a wonderful gorge, its barren sides cut by torrents into a huddle of isolated rocky pinnacles and narrow sloped arêtes through which it was difficult to thread one's way. From this the road ran across a broad table-land stretching away to Nagb el Gharib; to the east, across the Araba, could be seen the mountains of Kerak, very far away. The whole plain showed traces of ancient cultivation; this continued down the wady along which the track led us to Bir Rakhama, a shallow stone-lined well in the wady bed. Near the well were some Arab tents, and a considerable amount of the land was under cultivation. The only ancient remains were some Byzantine potsherds which strewed a little knoll (probably the débris of old tent dwellings, for there were no buildings), and a few ring-graves of the same period. The so-called Tell Rakhama was a natural limestone hill. On the next day I went about two miles along the wady; though there had been no rain for a twelvemonth, water was obviously close to the surface—indeed, in one place a woman was filling her pitchers at a hole less than two feet deep which she had dug in the sandy bed of the stream. Masses of small flowers covered the ground. Leaving the wady the road ran across the district of Um Deifi, a wide stretch of rolling hills, half of it covered with scrub, and half of it cultivated; but since there had been no rain, it was only in the hollows that a film of green relieved the brown of the ploughlands. By eleven o'clock the camels reached the long line of hills that shut in the plain to the north, and crossing a low neck came out on another plain watered by several wadies. The main stream, the Wady el Sidd, sweeps eastwards in a great curve under the high southern
 KURNUB. hills up to Tell Kurnub, when it breaks through them by a precipitous gorge, and runs on to the Dead Sea.

I left Kurnub on February 19th for Tell el Seba, and from there visited Tell el Sawa, Khirbet Wotan, Bir el Hammam, Tell el Milah, and Khirbet el Imshash; then on February 22nd I left for Gaza and the north.

In the meantime Lawrence had struck southwards from Kossaima along the old road by Wady Lussan and Kuntilla towards Akaba. All cultivation ceases south of the plain of Ain Kadeis, save WADY LUSSAN. for a couple of small fields banked out of the watercourses in Wady Mezra and Wady Lussan. And naturally when cultivation fails, all traces of fixed habitation fail also. Beduins have passed over the country and buried their dead there; travellers have gone up and down the great roads; but the only ancient one to build a house was a solitary Byzantine in Wady Lussan, and then perhaps it was rather for a road station than for a dwelling-place. By the wayside is one ring cairn of early date, piled together on a rocky outcrop half a day's journey below Kuntilla,* the new frontier-post of the Sinai Government; and there is a modern ring cairn just above Kuntilla. On the other hand there is everywhere clear-marked the great road, running straight over the low country, and twisting cunningly among the hills; a road of from ten to forty single tracks, all of which are worn down an inch or two into the flint-covered limestone, and polished by the pads of camels till they glitter white in the sun.

The landscape is only an exaggeration of the northern country. There are the same great stretches of flaky limestone, so overlaid with brown flints, sand-polished, that the whiteness only shows through on THE Limestone PLATEAU. slopes too steep to hold the flint; and rising out of these flats and bounding them are ridges and mounds of the same limestone, capped with a harder layer, as smooth as a table-top and strewn with the everlasting flints (Plate XXXIII, 2). The straightness and regularity of these formations are curious. For instance, at a point five hours below Kossaima the plain is crossed directly from east to west by a sharp wall of hill, like a colossal embankment, two hundred feet high, broken just in the middle by a deep gully through which as by a door the old road passes. To one coming from the south this gateway is the point from which he first sees the plain of Ain Kadeis, while the Kossaima plain is hidden behind its hills: Ain Kadeis is therefore the more notable point, and might attach its name to the district.†

To the east of the road the prospect is always mountainous. At the first

* Which is not Contellet Garaiyeh.

† P. 53 ff.

on leaving the Kadeis plain are Jebel Um Hashim and Jebel Aneiga; later on Jebel Araif el Naga, isolated (Plate II, 2); and south of it
 TO KUNTILLA. the mountains of Arabia, which form the further bank of Wady Araba. On the west side are some hills, but for the greater part the country is almost flat into the distance. Wady Mezra is the first great wady, Wady Lussan the second, Wady Mayein the third; and the last running down from the huge cone of Araif el Naga spreads out into a plain (Wady Geraia), many miles in width, of sand thinly covering a bed of flints. At times, however, there are low mounds and undulations rolling enough to hide the many wavering lines of brushwood which mark the almost imperceptible wady-beds. The water-holes Beda, Agrud, and Kuntilla all lie a little off the road, as do the wells of Mayein. Kuntilla is the Government post, made up of three or four stone houses on steep ridges, lying a couple of miles east of the great road. The well is in a wady before the houses, and is new; but an older one, now dry, lies farther down the torrent bed.

After Kuntilla the layer of flint that hid the limestone is replaced by nearly clean sand and the scrub of mingled *rimth* and tamarisk that is characteristic of much of North Sinai. A day to the south the granite and sandstone country begins in an abrupt row of knotted peaks, red or brown in colour and very hard and sharp in outline. The main road enters the middle of the wall of these hills by a narrow pass, and beyond them finds again open country—a white dusty plain with a floor of hard mud, in patches wind-swept clean of the sand. From this plain one comes quite suddenly to the edge of the plateau, the pilgrim way from Suez falls in on the right, and the united roads turn sharply down a little valley that is the beginning of the Nagb or pass of Akaba (Plate III, 1).

The way down is very splendid. In the hill-sides all sorts of rocks are mingled in confusion;* grey-green limestone cliffs run down sheer for hundreds of feet, in tremendous ravines whose faces are a medley of colours wherever crags of black porphyry and diorite jut out, or where soft sandstone, washed down, has left long pink and red smudges on the lighter colours. The confusion of materials makes the road-laying curiously uneven. The surface is in very few cases made up; wherever possible the road was cut to rock, with little labour, since the stone is always brittle and in thin, flat layers. So the masons had at once ready to their

THE NAGB OF
AKABA.

* Cf. Weill, "La Presqu'île du Sinai," for the geology of Akaba.

hand masses of squared blocks for parapets or retaining walls. Yet this same facility of the stone has been disastrous to the abandoned road, since the rains of a few seasons chisel the softer parts into an irregular giant staircase; while in the limestone the torrent has taken the road-cutting as a convenient course, and left it deep buried under a sliding mass of water-worn pebbles.

The gradients are steep, as is necessary in such precipitous country if great road-works are not to be undertaken: yet not so steep as to be impossible for wagons. A light cart could be taken up the road as it is to-day, though only as an experience, and not habitually. In the time of Ibrahim Pasha, who took guns over, it was doubtless in better repair. Here and there the rock-walls have been blasted. This is probably his work, and the lime and ashlar bridge at the foot of the great descent might be of his period also. It would be idle on such a road to look for very early traces. Macrizi says that Faik, about the time of Ahmed ibn Touloun (884-868) first made the road practicable for baggage animals, and that Bedr, governor for Haroun ibn Koumarouwaih and afterwards Mohammed ibn Kelaoun, repaired his work. Lying a few hundred feet above the bridge on the road-side are the broken pieces of an Arabic inscription of Kansuh el Ghuri, one of the last Mameluke Sultans, who also seems to claim the road.* The many stone huts on the ridges at each side were some of them sentry-boxes, others workmen's huts of the time of the road's prosperity, and there are many graves of Arabian pilgrims.

The great descent takes about an hour and a half on foot from the plateau to the bridge in Wady el Masri; and from there to the beach in Wady Araba is another hour and a half of easy road across the buttresses and soft foothills of the cliffs, down wadies and over ridges. The crests of some of these are cut through to ease the gradient, but it is only petty work.

The road finally reaches sea level on the extreme north-west beach of the Gulf of Akaba, and runs over the sand of the shore and through the old site of Aila between the palm-gardens into the modern village.

AKABA. It thus has to traverse the whole width of Wady Araba, a perfectly flat sandy expanse, very salt, with a few dom palms and many date palms and a little scrub to disguise its ugliness. Sweet water, or at least water not very brackish, is to be found by digging a hole a few feet deep anywhere near the beach.

* Translation by Professor Margoliouth on p. 147.

Proceeding northwards from Akaba the sand becomes cleaner, and there are few water holes ; but past Ain Deffiyeh and till Wady Ghadian the Araba has in spring an almost park-like air in comparison with the desert plateaux on each side of it. The tamarisks and small scrub found everywhere in wady-beds here become very thick and green, stretching over the flat floor of the plain in long lines like hedges, and every now and then great woody acacias stand out free of these, singly or in small groves. The surface soil is generally bad, much of it with the hard smoothness of never-broken ground ; there are no old sites or ruins in the main valley, and no roads, though indeed these latter are unnecessary where the whole surface is indifferently flat and easy. Every few hours' journey a greener patch marks a stagnant hole of water, which is always nasty to drink, in part from its own sedgy taste, and in part from the mixed flavours added to it by Arabs and their camels.

The Wady Araba has ever been a road from north to south, and of late years theorists in biblical geography have exercised their fancy in building ancient towns by the road-side. Thus Robinson identifies Ghadian. Ain Ghadian, a point a day's journey for a pack camel north of the Gulf, as a possible site not only for the Roman station of Ad Dianam (which might pass) but also for Ezion-Geber, and suggests that the sea may well have come up so far. It is true that Ain Ghadian seems to be the solitary spot in the southern Araba, not on the sea coast, which has any traces of settled occupation.* Two little rooms of mud and stones show that a Turkish patrol was posted there at the time of the delimitation of the frontiers, and behind the rooms is a very low mound about fifty yards square, which is probably the remains of an earlier building. There is just enough Byzantine pottery on the site to make possible the suggestion that in late classical time a policeman was stationed here to guard the wells ; and, of course, there is no proof that there was not a similar inhabitant in Jewish times. Yet Solomon's great seaport must surely have measured more than fifty yards each way, and it would strain the Indian Ocean to bring it two hundred feet uphill. Ghadian to-day is not attractive : there are eight smelly pits in which water collects a few feet down, and the land about is a bush-covered, salty, sandy waste, fit for camels.

* There are ruins in the side valleys of Wady Gharandel (Musil, *Edom*, ii, pp. 194-196) and Wady el Meneiaieh (Musil, *Edom*, ii, pp. 187-189).

North of this point the valley becomes entirely sterile as far as Wady Gharandel (Plate IV, 1). It is all filled with waves of shifting sand, very deep and soft, in which grow colocynths, and in harder hollows tamarisk. AIN GHARANDEL. Ain Gharandel wells out in a narrow cliff-edged valley of green trees on the east side of Wady Araba, but the water, though sweet, is not very plentiful. Wady Gharandel is a roadway to the eastern table-land, and at its side are two ruined buildings.* Geographically it is a useful point, since from it northwards the Araba becomes nearly free of sand, but mounts up in a long stony slope, very barren, to the watershed a few miles south of Jebel Harun. Also, from Gharandel northwards the western range breaks down; and in place of the riot of hills around the Nagb is a soft country of white limestone-like chalk, very passable, though tedious, since it has worn away into numberless little folds and ridges. Still, it is a distinction that from Gharandel to Wady Musa on the Sinai side the Araba is not an impassable ditch, but a depression.

Jebel Harun is visible from just before the watershed, and thereafter the look of the valley changes. Its slopes are cultivated in places, broader, at any rate at first, without trees or tall scrub, and with ring graves and cairns, occurring not uncommonly on the lower foothills.

Lawrence went no further up the Araba than this, however, but passed by a steep route over the shoulder of Jebel Harun into Wady Musa, and thence to Maan and the Hedjaz railway.

* Sufficiently planned by Musil in his *Edom*, Part ii, p. 196.

CHAPTER II.

THE HISTORY OF THE SOUTHERN DESERT.

"A blank, my lord."

Physical characteristics : An inhospitable desert : The stones of it : The hills and valleys : Floods : Shrubs : Climate : Lack of written records : Permanence of material remains : Flint implements : Stone circles and cairns : Many varieties : Their classification and chronology : at Kossaima. : at Ain el Guderat : on Tell el Seram : at Muweilleh. Dwelling-house ruins : at Muweilleh : Guderat : Raheiba : Bir Birein : Akaba. The Nabatean period : Abda : Khalasa. The Byzantine period : Increase of population : Wealth : Trade routes : Fortresses : The religious elements : Churches : Monasteries : Agriculture : Rainfall : not more than to-day, judging from the state of early remains, lack of timber, and lime mortar in Byzantine houses, cisterns, and corn stores, wells at Khalasa, Raheiba, Auja, tamarisk-hedges, and extent of plough-land. The fall of Byzantine civilization. Sinai during the Crusades and to-day.

THE sketch of our route in the foregoing chapter will give an idea of the physical characteristics of the country. The wearing monotony of senseless

A POOR
COUNTRY. rounded hills and unmeaning valleys makes this southern desert of Syria one of the most inhospitable of all deserts,—one which, since the Mohammedan invasion, has been an unenvied resort of defeated tribes too weak to face the strenuous life of the greater deserts. The names of its tribes, the Tiyaha, the Alawin, the Terabin, the Azazma, are unknown beyond its limits, and their men are few in number, poor in body, and miserable in their manner of life, "very small, very spare, and sadly shrivelled—poor over-roasted snipe—mere cinders of men."*

The surface of the desert is, for the most part, a limestone so soft that it offers little resistance to the erosion of wind and rain. Quarrying produces a

STONES. hard shelly stone, much in use at Abda, an equally hard semi-crystalline limestone that is used in the lower parts of town buildings of the Byzantine period—the stone of the boulders of all the watercourses about Ain Kadeis—and a soft honey-coloured chalky

* Kinglake, *Exothen*.

limestone used by Byzantine masons for the upper parts of walls, and for vaults and arches. In the extreme south and east, along the Araba and above Akaba, the limestone disappears, and diorites, porphyries, and sandstones take its place. In the extreme north, east of Beersheba, the hills are covered with, and in part formed of, a kind of flinty conglomerate. The softest stone, the chalk-like limestone, is everywhere seamed and laminated with strata of red flint. As the limestone crumbles these flints are washed out by the rain, and cover the whole surface for miles and miles with a layer so thick that the white powdered stone scarcely shows through between. Into this surface the feet of men and camels sink a little every step, except where well-worn tracks have pressed hard the ground beneath. When there is a wind (and nearly always there is a great wind) a fine blast of sand drags over these hills, polishing the surface of the flints to a deep brown-yellow that reflects the sun's rays, shining as though the stones were wet with dew. Most of the map is filled with petty hills and small shallow valleys; there are many barren table-lands and a few deep hollows and wide valleys drowned from bank to bank under the great billows of moving sand-dunes, and overgrown with colocynth, which emphasizes their incurable desolation. In rare places the narrow

WATER COURSES. torrent beds spread out into broad, smooth plains, whose floors of original sand have been laced with plant roots and cemented by water into a hard soil worthy of cultivation. The brief winter rains generally bring some measure of fertility to these lands; but the water either drains quickly through the light soil and is lost in the stones beneath, or is dried up by the heat. More often than not the thin veil of green that February drew over the ploughed valleys of the Beduins disappears before the suns of March, leaving the face of the country as bare and hopeless as before. The harvest depends chiefly on the latter rains of early spring, and so fickle are these that the crops seldom ripen to maturity oftener than once in three or four years.* Even the scanty soil itself, which the Arab ploughs less in hope than by habit, is sometimes lost to him, carried away by a torrent that sweeps down the wady, and leaves in its track bare white boulders and a tangle of uprooted shrubs. The water of the flood made the field in the first instance by depositing its alluvial earth; and it is as ready on a second occasion to remove it to a new place, or to dissipate it among the stones. From these

* W. E. Jennings-Bramley, in *P.E.F. Quarterly* for Jan., 1914.

destructive floods the local eras are reckoned, and it is seldom that two have descended the same valley in the memory of an ordinary man.

Only in one place in all this country is there a stream of real running water that can serve for irrigation—in the little valley of Ain el Guderat,

RUNNING
WATER.

where for two or three miles fields of corn and spreading trees refresh the eyes wearied by the glare of the sun on white ground and polished flints, and by the uniform grey scrub on bare hill-

sides and in grey-brown valleys. The unaided vegetation of the Negeb hills is *rimth*,* a wizened cankerous scrub of stiff twigs, unpleasantly adorned

TREES.

with colonies of white snail shells. The snails for some reason climb up the rimth shoots, and spend the summer hanging there dried up; it may be that the parasite growth all over the plant

affords them a little nourishment. On the hills is some juniper, on the plains much white broom, and everywhere the beautiful feathery tamarisk in abundance along each dried-up watercourse. Sometimes the tamarisk is almost a tree, growing to a height of fifteen feet or more, but generally the Arabs cut it down and use it for firewood before it reaches its maturity. Thanks to the tamarisk and broom, travellers in Sinai in the winter season can always have a fire at night to keep warm their camps. There are also *ethyl* and *butmeh*† trees: they are no use for anything.

The climate of Sinai is a trying one. In summer, of course, it is blisteringly hot, and in the winter cold with the unbridled cold of an abandoned country over which the wind can rage in unchecked

CLIMATE.

fury. Snow is rare, but frost not uncommon. In winter there is much rain; in spring it blows both cold and hot, and there are

occasional storms of rain and sleet, and sometimes days of a steady down-pour, in which the Beduins rejoice. After such there will be a splendid harvest; all the better, no doubt, from the enforced fallows of the barren years; but such success is too rare and too uncertain to attract the professional farmer. We shall have something to say later on, when dealing with the Byzantine period, about the vexed theory of a greater rainfall in antiquity; but we may state here our emphatic belief that at no time since man first settled in this land has the rainfall been appreciably greater or more regular than it is now. All our evidence points to the antiquity of present conditions: to a state in which water was most precious, and the

* *Anabasis*.

† *Butmeh* is terebinth.

tilling of the soil at once laborious and ill-repaid. If the reverse were the case it would not make of this desert a fruitful field, for the most abundant rains can do but little to fertilize limestone and flint. It is emphatically a country either for nomads whose camels and goats may contrive to exist upon the scanty pasturage of the stunted scrub, or else for a very clever and frugal agricultural people who can husband such little water as there is, and, by a system of dry-farming, overcome the niggardliness of nature. In no respect is it a land for a large population, and the considerable towns whose ruins now surprise us in the waste all obviously owed their existence to extraneous forces. It is, we think, both natural and correct to assume that at all periods in man's history the southern desert has been very much the desert that it is to-day.

In writing the history of Northern Sinai we are at once met by a great difficulty, the absence of significant references to the country in early records.

NO WRITTEN
RECORDS.

This, of course, in its not very satisfactory way, gives an exact indication of the importance of the country in that time. It was a roadway at best, and a very unpleasant one. Travellers passing from Egypt to Syria by land all had to traverse it, and they went, as they do to-day, by the El Arish road if the governments were favourable, and by the Hebron-Beersheba-Muweilleh roads in other cases. The Egyptians, the Patriarchs, the Jews, the Romans, the Crusaders and the Arabs all passed over these tracks, and they have given us place-names and no more. Probably in their eyes the country was too detestable to merit further reference, and by their default our notes on the history of the desert have to be compiled from the remains of occupation preserved in the country itself. By good fortune Sinai lends itself to such research, for everything that has ever been made in the desert is kept for ever for all to see. The careless traveller who piles up four stones in a heap by the roadside here erects an eternal monument to himself.

In the books of our predecessors the prehistoric age is the most fertile in material remains in the Negeb. They make constant reference to flint implements, and to cairns and graves and dwelling-houses of the Stone Age. Palmer even saw in the stone-heaps of Muweilleh a great city of the prehistoric period, and has no hesitation in describing as neolithic the stone circles of Ras Seram and other places. Holland traced ancient roads across the desert by the heaps of flint arrow-heads lying on either side.* Only

* Holland, *P.E.F. Quarterly*, 1879, p. 62.

Lord Kitchener thought that some of the cairns must be of comparatively recent and Arab origin.*

Now we have searched for stone implements over the whole face of the country, and have found very few. We brought away the four or five we found, and also a representative collection of flints so chipped that they might well be mistaken for results of human industry, while, in fact, they were found in circumstances which made any but a natural origin ludicrous. The land is a land of flints: on all hill-slopes the exposed edges of the limestone have been eaten away by the wind, and the flints of the alternate layers have slipped forward until the slopes are red with them. The nodules in these strata are usually cracked into numberless pieces that still cling together; others have been splintered and scattered before the stone formed around them. On every yard of ground, and even out of the broken nodules that still hold together in their matrices, one can pick up what might well pass as worked flints. We chose our selected pieces carefully from such impossible places, and in England have succeeded in deceiving with them several good authorities on flints by presenting these, so to speak, without context.† Were these genuine, a little patience only would be required to collect from any one hill-side such an array of primitive weapons as would sink a battleship. It was this abundance of nature, rather than the extravagance of primitive man, which made ancient roads so easy for Mr. Holland to follow. Of the four or five real stone implements which we found, one came from Wady Ain el Guderat near the threshing floor, and all the others from Tell el Seram, a conspicuous natural hill in the middle of a wady south of Auja. We have no means of dating the Guderat flint, but those from Tell el Seram were found in and about the drift-sand which filled stone hut-ruins on the hill-top, together with quantities of broken pottery of the Byzantine period. Everything points to the potsherds and the flints being contemporary. The peasants of the Byzantine Age were presumably as resourceful as those of to-day, and to-day throughout all Syria flint instruments are freely used. The teeth of chaff-cutting instruments are always small pointed flakes of flint properly struck from a core. Oval "scrapers" are used by shepherd-boys to shear the sheep, ousting, in many

* Hull, *Mount Seir*, Appendix, p. 204. The other members of the expedition were not of his opinion, but he adduced good reason on his part.

† Sir Arthur Evans was not deceived.

cases, the iron shears to which European commerce gave a brief vogue, and straight heavy knives, often a foot or more in length, are made in any emergency for hacking to pieces a dead animal. Zeyd, Mr. Holland's guide, knapped a flint when he wanted to trim his toe nails, and sometimes a flint razor is still used for shaving the head. In all cases the implement is used upon the one occasion and then thrown away. To date such castaways is difficult, for the brown patina of Sinai takes only a few years to produce; flints lying on modern Arab graves are a beautiful brown on the exposed side and quite white underneath. Any man at any period may knap and use a flint, especially when there is such profusion of raw material, and one cannot from the casual product of his industry argue a Stone Age in the exclusive sense of the term. In our opinion all flint evidence tends to show that man had emerged from the historic Stone Age long before he tried to live in the Negeb.

Great quantities of stone circles and cairns still exist in Sinai. In our part they are not equally distributed, but are most common between El Auja and Wady Lussan, and in the hill country to the south of Beer-Sheba. They are rare to the south of a line drawn from Wady Lussan to Jebel Harun. Of all sorts and sizes, they are built of rough unshaped boulders or blocks of limestone, interspersed with large lumps of flint, and they are nearly always placed upon rising ground, often upon the tops of the most prominent hills. We have visited a great number of these and dug out a fair number, and the conclusion at which we have arrived is that in all probability none of them go back to the prehistoric Stone Age; that a small number of them, in certain districts, are as old as the middle of the second millennium B.C.; that from that date to the present time such monuments have been erected by the nomad population of the country, and that of those now existing few are older than the Byzantine period, and the vast majority are comparatively modern. Believing these conclusions to be correct we must none the less put in a word of caution regarding them. These structures conform to a tradition, as will be shown later, singularly consistent; their workmanship is, *ex hypothesi*, primitive in character, and their material is necessarily identical at all periods. Even with careful examination it is generally difficult and often impossible to fix the approximate date of any one cairn.

We could not dig every cairn we saw, and therefore we have had to base our general views upon a limited number of cases in which internal

evidence was conclusive, upon analogies with these, upon arguments of association, and upon common sense.

The stone monuments of the country may be classified as follows :—

1. *Ring graves.* These are stone circles ranging from two to five yards in diameter, the walls one to four courses high ; the interior of the ring is filled up nearly to the height of the walls and not infrequently covered roughly over with large slabs, sometimes heaped up with stones so as to form a pyramidal mound.
2. *Rectangular graves.* Small square buildings of rough stone, generally from two to four yards across. The footings of the walls often go down some two or three courses below the ground surface, and the walls themselves rise three or four courses above the ground ; the interior is filled in with stones and soil, and sometimes covered over with rough slabs.
3. *Chamber tombs.* Rectangular buildings like the last, but standing anything up to six feet high and roofed over with very large stone slabs. The best example of these was on Ras Seram ; the building measured about eight feet square externally ; the chamber was about four feet square and covered with four ring roofing slabs of which two remained in position. It was filled

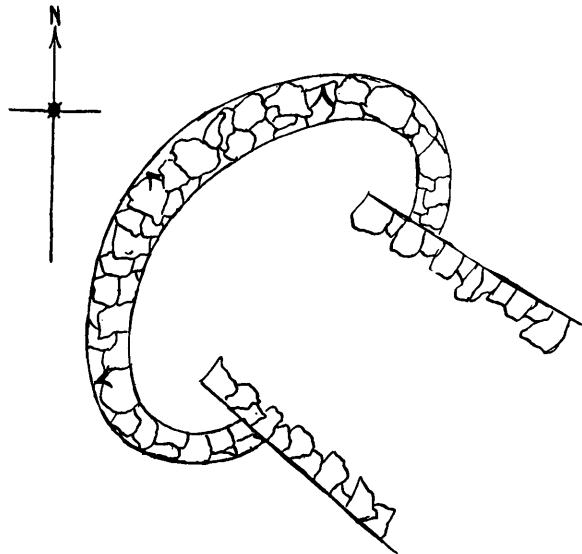


FIG. 1.—SEMICIRCULAR SHELTER BETWEEN BEER-SHEBA AND KHALASA. 1 : 50.

up to half its height with stones and soil ; there was no doorway or window ; from its west side a low dry stone wall about seven feet thick ran in a straight line west for nearly thirty yards. This would seem to be a crude form of Zigarat. Round one on the hill-top facing the

mouth of Wady Guderat were a number of sandal marks,* such as are common on the sides of Jebel Harun.

4. *Round shelters.* Roughly built stone rings, the wall probably never more than four courses high, and open on one side; the opening is sometimes so wide that the building is more properly described as a semicircle (Fig. 1). The floor is often sunk below the level of the surrounding soil.
5. *Rectangular shelters or houses.* Long rectangular buildings generally divided breadthways by cross walls into three or more chambers communicating with one another or having separate entrances. The floors are sunk below the level of the surrounding soil, and the lower courses of the walls are of large blocks with smaller stones above. The walls were never more than three feet high.
Sometimes there is a combination of 4 and 5, a circular room being set in the middle of a long rectangular building whose width corresponds to the diameter of the circle.
6. *Sheep pens.* Large rings with roughly built low walls of small dry rubble.
7. *Dead Man's piles or Makatal.* These are small cairns of rough stones put up where a dead body has been found; the man is very often buried elsewhere, and the cairns merely mark the spot at which he was murdered.
8. *Memorial heaps, "Shehadat."* These are small stone piles like the last, but made close to, and in connection with, the actual grave, being built by the relatives of the dead man, either at the time of the funeral, or on anniversaries. By the grave of an important person there may be a great number of such small cairns. The long line of stone piles on the crest of Jebel Muweilleh, which made Palmer think that this must be the site of a great city, are simply such memorial heaps connected with the few large ring-graves that are dotted about on the hill-top.
9. *Ritual heaps.* Mounds of small stones with a sacred or semi-sacred connection, on to which any passer-by may throw another stone; probably he does not know his reason for doing so and could not

* Made by tracing the outline of the sandals upon a great rock with many sharp blows of a pointed flint. A crude autograph.

account for the sanctity of the spot ; but presumably somebody knew once, and he feels that he has acquired merit by carrying on the tradition.

10. *Roadside heaps.* Small cairns or heaps piled up by travellers along the roadside to express their feelings ; generally the feeling is one of relief at having climbed a particularly steep part of the road, or at having arrived at a spot from which the travellers get a good view over the country they wish to reach. Our camel men made such piles, and so on one occasion (south of Wady Lussan where there are hundreds of such heaps, great and small) did the cook, though he was a Christian from Mosul, sophisticated by a long sojourn in Jerusalem.
11. *Boundary heaps or guide heaps.* Piles set on hill-tops either to mark the boundaries between the grazing-grounds of different clans, or to accentuate some natural feature by which the Arabs may take their bearings in a wild country where tracks are all alike.
12. One may add to these the "*trig-points*" of the present survey, which are often not to be distinguished by the visitor from the heaps classified as 8, 10, and 11. This is a very large class.

The date of these various types of mound can best be discussed after we have given in full such detailed evidence as was forthcoming for the limited number of examples which we were able to examine.

THE CHRONOLOGY OF THE STONE MONUMENTS.

On a small hill close to the Government station of Kossaima was a group of ring graves, all presumably of one date. On the north side of many of them were found the fragments of pottery vessels
 KOSSAIMA. that had been placed against the face of the ring wall ; the pottery was thin and very hard, of a gritty clay, hand-made, and baked in an open hearth, red on the outer faces, and black or grey in the section ; all sherds were much weathered and sand-polished. Four graves were cleared out by us. The first was quite empty. The second, which measured 1 metre across internally (Plate VI), and had walls of upright stone slabs resting on the rock surface of the hill, contained about 40 centimetres of light soil, and also produced no results ; in the third, near the top of the filling, were the fragments of a flat-bottomed jar, of the usual type of ware, much

rotted by the action of salt, together with fragments of a large, well-turned, hand-made vessel of a grey clay, burnt on the face to a light pink, and of another pot of very gritty black clay. The fourth grave produced a few decayed bones of a young child, and a fragment of bronze wire, apparently from an ear-ring. On the analogy of pottery found at Muweilleh and Ain el Guderat we should attribute these graves to the second millennium B.C., and perhaps rather to the first half of it.

Near the mouth of the Wady Ain el Guderat, on a mound of the foot-hills, was a group of perhaps fifty graves. The stone rings were rather oblong than round, lying E. by W., and occasionally a larger stone at each end of the ring made a kind of head- and foot-stone. All around on the surface were many sherds of hand-made pottery of the Muweilleh and Kossaima types, and of wheel-made wares resembling those found upon the Tell el Guderat. Two graves were dug. The shafts were sunk in the hard sand, rather more than a metre deep, and the body was laid in a recess cut in the south side of the shaft, and closed by large flat stones leaned against the wall. The bodies were extended on their backs, the heads west, the hands by the side. The first grave produced (low down in its filling) two sherds of hand-made pottery and a scrap of bronze; the second two fragments of wheel-made vessels; the graves must be connected with the settlement on the tell, and would belong, therefore, to the middle of the second millennium B.C.

In the middle of the Wady el Seram, some three miles from El Auja, there is a long, saddle-backed hill, with steep sides and straight, narrow top, running N. by S., called Tell el Seram; on it are nine cairns in a row (Plate IV, 2). At the north end are two circular cairns; then a rectangular pile some two metres square, standing three cairns high. Next comes a rectangular house cairn (Class 5) of four compartments, precisely like others we had seen in the Wady el Abiad. Beyond this the monuments are in pairs, a small rectangular structure, and a larger round cairn; further on a large square cairn (Plate IV, 2, and Plate V), with a small ring near its north side; and at the south end of the hill two pairs of large and small stone circles. At either end of the hill is a low, straight wall, running N. by S., not touching the tombs, but obviously in connection with them. From No. 3 onwards all make an absolutely straight line running ten degrees east of north. Cairns Nos. 4, 5 and 7 were dug. The walls of No. 5 went down about sixty centimetres to bed rock; the interior was filled with light lime, in which

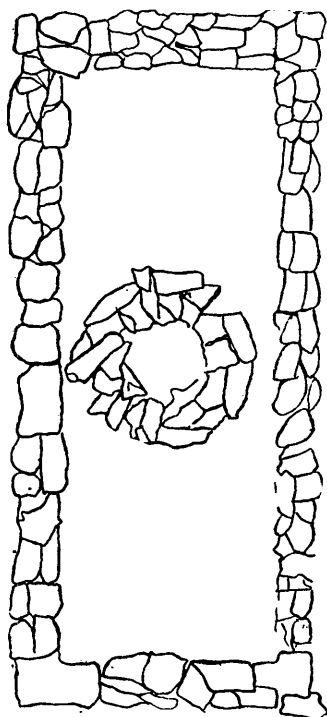
WADY EL
GUDERAT.

TELL EL
SERAM.

were the bones of a child in very rotten condition—their original position could not be ascertained. In the large cairn (Class 7), under a filling of small stones and sandy lime, placed within a rough cist of stone slabs, were the bones of a man, extended on the right side, the head west, the face turned to the south (Plate V). Nothing was found with the body. The bones were remarkably fresh and strong; the skull only had been smashed. This was noteworthy, as the lime in which these lay has generally a bad effect on bone, and together with the Mohammedan disposition of the body is an argument for a late date. Probably this grave is of the same type as those burials “in stone cists within circles” described by Palmer. Accurate dating evidence, however, was obtained by digging on the house site (No. 7), which undoubtedly stands in close relation to the tombs. The place was littered with potsherds of the types most common in the rubbish heaps of Khalasa, at Esbeita, and generally in the Byzantine cities. The conclusion is obvious. We have here the huts and the graves of the nomad people who, throughout, and after the Byzantine period, kept their flocks of goats and their camels on the rough hill pastures. Just as the modern Beduin, living a similar life, obtains his household vessels from the kilns of Gaza, so these, his forerunners, used the same pottery as did the more civilized dwellers in the towns and valley farms—a pottery which also, in all likelihood, was the product of the Gaza kilns. Ring tombs, similarly dated by pottery to Byzantine or slightly post-Byzantine times, have been noticed by us at Bir Rakhama, Ain Kadeis, Abda, El Auja and Esbeita. North of Khalasa we dug two circular hill-top cairns, close to both of which Byzantine or Arab pottery was found; in one of these was a flattened lead bullet. Not less important is it that the modern Arab, here in the south, generally makes graves of the same form; thus, close to Kossaima we photographed (Plate VI) a modern ring grave of precisely the same type as the cairns of the second millennium B.C. on the other side of the spring; a rag on the grave kept up the tradition of the offering placed beside the ancient grave. A better illustration of offerings at a modern grave—though the grave is not a circle, but of the normal Arab type—was photographed at Ain Kadeis (Plate XII, 2); on the headstone is the dead man's skull-cap; close to it are his shirt, his headcloth, his pipe, and his camel stick, while a black Gaza pot is leaning against the graveside.

There were many ring graves for which we could not find any positive dating evidence; thus, on Jebel Muweilleh the graves produced
 MUWEILLEH. neither pottery nor any other objects, and this very absence of

pottery would seem to distinguish them from the undoubtedly early graves of Kossaima and Wady Guderat; on the other hand, the group included a house ruin of the mixed rectangular and circular type, and such a ruin at Ain Muweilleh was found in connection with an early settlement dated by pottery (Fig. 2). The weathering of the lichen-covered stones on Jebel Muweilleh showed that the tombs must be of a respectable antiquity, and perhaps it is safest to assign them to the early first, or to the second



1 : 150.

FIG. 2.—RECTANGLE AND RING ON JEBEL MUSHRAG NEAR MUWEILLEH.

millennium B.C. Very often ring graves were proved to be of modern date by their position; the Arab of these parts prefers to bury his dead in the neighbourhood of water,* and actual water spots being few and far between, often chooses some ancient ruin near which, presumably, water must once have existed. Thus, we found ring graves in the ruins of an isolated Byzantine farmhouse high up in the Wady el Ain, on the Tell of Ain el Guderat, on Tell Kurnub and Tell el Milah, on the town site of El Auja, etc.; these tombs were obviously post-Byzantine; many were frankly new.

Both round and rectangular shelters (Classes 4 and 5) occurred at Ain Muweilleh (*see* p. 22), where they were of the second millennium B.C. The post-Byzantine structures of the same character on Tell el Seram have already been described. Both types are still in use at the present time. A mighty circular breastwork of stones is piled up, three or four feet high, and above this are heaped branches of tamarisk and broom or other desert shrubs; there is no roof. If the housebuilder is rich in the possession of a tolerably decent piece of goat's hair tenting, the shelter tends to be rectangular, the ground level is lowered inside the walls, and the tenting is stretched over the room from wall to wall, its edges kept in place by stones, and we have the second type of modern shelter, which undoubtedly corresponds, as

* The inquisition after death by the two angels is a thirsty business, and it is more convenient to have water close by.

Dead men's piles and memorial heaps are commonly made at the present day. The modern Arabs build large things upon occasion, like the stone wall, five or six feet high and very long, seen by Russegger near the Red Sea, on the road to Sinai,* and they put up small piles continually ; indeed, in regard to these and the remaining classes of stone cairns there is nothing to prove that any one is old : and if we assume some of them to be so, it is only because we know that modern customs generally have their roots in the past, and because history quotes some ancient instances of man's inveterate love for piling stones (Gen. xxxi, 46 ; Josh. iv, 20).

NO STONE AGE IN SINAI.

The poor huts of Muweilleh (which are, as has been pointed out, the poor huts of the modern Beduins) continued to be the normal type of dwelling used by the ancient desert wanderers. Only at Ain el Guderat, in the one fertile valley of the south, there sprang up a built fortress which, in the latter half of the second millennium B.C., commanded the approach to the precious spring and guarded the

E 2

fields that it watered. To a rather later date, probably to the early years of the first millennium B.C., belong two other buildings, the little hill-forts at Tell el Kasr el Raheiba, and at Bir Birein, which command the Darb el Shur (*see* p. 41). But these, like the Guderat Castle, are not really dwelling-places; they are military police stations set here for the defence of a trade route; their isolation and their *raison d'être* alike only emphasize what must have been the unchanging character of the country about them—a wilderness into which no one, save a few poor nomads, would come unless he were obliged, a stretch of ill road along which one hurried perforce to an attractive goal. These places are eloquent of the history of the country because they are so unrepresentative and so few. The same truth is pressed home by those sites to which written history would direct us, Elath and Ezion Geber, the Red Sea ports of the Phœnician league. Here there are no great harbour works, no ruins of thriving towns, but on the sandy beach and rocky islet doubtful traces at most of a little trading station where the troops of the convoy drowsed between the rare visits of the Eastern fleet.

Modern Kossaima, with its police barracks, its Government house, and its three shops, may well give us a fair picture of these guard-posts of the Jewish kings, and Akaba to-day is a not unworthy descendant of Solomon's seaport.

The next period of occupation in Sinai was, like the Jewish one, due to trade. The flourishing Nabatean kingdom in Petra built itself a seaport or two in Southern Syria, and made roads with guard-houses along the lines of communication. In the centre of the hill system it built the town of Eboda or Abda, probably named after a relative of Abraham, in a habitable place not far from the junction of the two roads from Khalasa and Gaza to Wady Musa. In Abda to-day under the debris of Byzantine monasteries, one can still find the remains of a great pillared temple which probably (*see* p. 95) dates back to the second or third century B.C. Round it and below are the ruins of what seems to have been a fair-sized settlement, with a reported "high-place" and tombs (with Nabatean inscriptions) whose internal arrangements are those of the tombs of Petra.

The Roman town of Khalasa (*see* p. 109) may also date back to the second century B.C. and have been a second guardian of international trade. Its classical name was Elusa, and as Abda had its eponymous hero, so Elusa was a religious centre, with a goddess of its own so obscure and so ill-reported

by Jerome, that Wellhausen* and Robertson Smith fall out as to her probable name and condition. She seems to have been connected with the morning star, but whether the star was male or female, and whether the goddess was that goddess called Khalasa or no, appear equally doubtful. She was certainly, however, a Semitic goddess, taken over later by the Romans. In the Byzantine period (unhappily for modern archæologists) the city became very great and very important, and the earlier town was swallowed up in later constructions; afterwards, when Gaza was building, the masons found it easier to quarry stones from the ruins of Khalasa. The site is now a disheartening pile of tumbled blocks and stone chippings, out of which nothing can be made. Therefore we were fortunate to find the cemetery, and in it among many Greek gravestones one early thing—a dedication in Aramaic characters and the Nabatean language to a king, Aretas, who must be one of the kings of that name at Petra (*cf.* Chap. VI, p. 146).

In the Byzantine period a deep and sudden change came over the whole aspect of Syria. The destruction of the Jewish and other little states of the

East by the Romans gave Palestine for almost the first time in
THE BYZANTINE PERIOD. its history the fortune of some centuries of reasonably good government and unbroken peace. In these settled conditions

Syria realized that potential wealth she always possesses. The people began to multiply, and under stress of new needs developed their land to its utmost. Reclamation schemes were set on foot, and the whole country was covered with a network of paved roads, having rest- and post-houses at intervals, and substantial bridges over every stream. The mud huts of the peasant farmers became solid homesteads; hamlets sprang up where had been an untrodden wilderness. The villages became towns, and the old Semitic collections of squalid houses were replaced by regularly planned cities on the Roman model, with shaded porticoes and colonnades leading to marble temples, luxurious public baths, and private houses as sumptuous as palaces. About the busy streets moved a cosmopolitan crowd—Jews, Phœnicians, Persians, Armenians, Arabs, speaking to one another a common Greek, but flaunting their unconverted Oriental taste in the weight and costliness of their ornaments, and the medley of brightest colours in their effeminate robes. From the Euphrates to the Red Sea the ruins of this period transcend those of the earlier times, and bear witness to a population more numerous and

* Wellhausen, *Skizzen*, iii, 44. W. R. Smith, *Religion of the Semites*, p. 57, note.

more wealthy than the land has seen before or since. It would not be astonishing if the increase of population and the improvement in agriculture had led to a certain migration southwards on the part of a people who had both the capital and the technical skill to develop the unpromising soil of the south country better than their ancestors had done. At the same time such migration would naturally follow the lines of trading routes on which economic conditions offered of themselves additional resources.

Side by side with the growth in wealth of the Byzantine Empire had come about a great increase in trade with the Far East. Over Turkestan moved continually the long slow lines of camel caravans laden with Chinese silks and Bokhara carpets for the Greeks. They used to come to golden Samarkand and thence turned either through Persia, if the way was safe, or by the northern shores of the Caspian to the mart of Cherson and across the Black Sea to Constantinople. From Ceylon and the Indian ports and South Arabia came cargoes of spices and emeralds and silks to Aila and the other Red Sea ports, and passed thence by land over the desolate hills of our part of Sinai, either to Gaza for shipment to Greece or to the opulent cities of North Syria. And this latter route was at once cheaper and more secure than the long northern journey over the Mongolian desert. In consequence at various times (notably in Justinian's reign) we find the Byzantine Government fostering this trade, whose effects are still plainly visible along the road. Khalasa, to take but one of the towns of the southern desert, could never have employed all its teeming numbers to till the surrounding plains, carefully though they were tilled, and very great though they be. From its position at the north end of the Aila-Gaza road one can reasonably suppose its urban population supported by the carrying trade, and by the unravelling of imported *όλοσηρικόν* and the weaving up again of the mixed silk and linen fabrics that passed current in the marts of the West. Beersheba and Raheiba, lying on the same trade route, must also have had their industrial population as well as their peasant class.

The Byzantine Government, devoted to bricks and mortar, was not slow to extend its protection over its south-eastern frontier. Syria, the rich and populous province of the Empire, was also a source of anxiety, thanks to the threats of its powerful and covetous neighbours on the east. The rulers of Persia and Irak, Rome's old enemies, whether encouraged by victory or irritated by defeat, were always renewing the struggle on even terms. In time other possible

enemies were added to these. The Ghassanids and the country of Hira both shared in the Arab revival brought about by the return of trade to the Elamitic gulf. Persia at times threatened even this distant region, for in 570 A.D. a Sassanian took Mecca by storm and held sway in the Yemen, and in 614 A.D. another sacked Jerusalem. The Persians conquered Egypt once. It must have been the fear of these enemies, or of the more constant waspish forays of the Nomad tribes provoked by them, that turned the Emperor's attention to the defence of Sinai. The forts there are of Justinian's plan and most probably his work, but only a bureaucratic pedant could have imposed on a desert such incongruous defences, which seem intended rather to complete a theory than to meet a local need. His border system of scattered fortresses worked admirably to hold a river line or to block mountain passes, but was peculiarly inadequate against nomad raiders in a country where roads are arbitrary and innumerable. Auja, Abda, and Kurnub were walled castles with garrisons of regular troops, and there were forts at Aila and Khalasa ; but for all that, the inhabitants of each town or village must needs build their houses shoulder to shoulder, and loophole the blank outer walls for rudimentary defence.

But if these great buildings were primarily due to the Emperor's inelastic scheme of imperial defence, yet in all we find their proper warlike character modified by features peculiar to this district, and suggestive of another influence.

In addition to their corn and wine and silks, the people of Syria had a second commerce in their unlimited holy places, and, indeed, in their sanctified air. In the Christian-Byzantine period these commodities were the more prized as the temporal influence of the Church increased, and bishops became professed politicians. Churchmen lived in the palace, and piety fled to the wilderness. The Sinai desert shows all these things. At Auja, castle and church dispute the hill-top : at Kurnub the church has it. The castle at Abda is an annexe of the convent, and at Khalasa the fort was a cure of the bishopric of Gaza. And if in these larger centres we see the Church wedded to the State, in the smaller we find no less clearly the religious devotee attempting to hedge himself off from the secular world. The three great monasteries of Esbeita were the nucleus of the little town that huddles round them ; Tell el Sawa is nothing but a monastery with its dependencies ; and the group of buildings conspicuous on the rock promontory of Mishrafa is a Byzantine "laura" whose monks

climbed up from their isolated cells on the cliff-face to the common chapel above.

The influx of population into the country north of Ras Seram and Abda brought about there a remarkable change. Monks, soldiers, and merchants must all eat, after their degrees, and food had to be provided despite the unwilling soil. Every flat stretch of valley or upland was put under cultivation. Across every wady, not only in the broader watercourses, but where the rain torrent had cut channels far up on the rocky hill-side, low walls were built to catch the flood-borne earth in a staircase of terraced fields, and later to fan out the rush of the torrent over a great space, that the gathered soil might not be carried away, but might retain on the steps such moisture as it received. Olive yards were planted at the foot of hills, and vines were induced to grow on the flint-strewn slopes of disintegrated limestone. So thorough was the laborious agriculture of the period that its remains are the first and the last things to catch the eye of all travellers in the desert. The great barrage of Kurnub, with its thirty-six feet of smooth masonry, is not more wonderful in its place than the tiny remains of little lonely farms, miles apart, on the bleak upper slopes of Jebel Magrath. To find stone-built houses in solitudes, broken terrace walls in every wady, and long rows of flint heaps that mark ancient vineyards, makes so deep an impression that it is easy to see things in a wrong perspective and to forget the uneconomic origin of it all. We have probably sufficiently explained away the towns. Where they are not purely military or religious foundations they owe their existence to the trade routes, and are in no way determined by the quality or extent of the plough-land about them. Were it otherwise the splendid upper reaches of the Wady el Hafir, larger than the tilth of Auja, of Khalasa, of Raheiba, of Esbeita, and not remote, would have been the site of a city greater than these. But this wady lay off the high-roads, and so its solitude was disturbed only by scattered farms.

The truth is that the land was poor, desperately poor,* and that all this labour and capital and ingenuity were contributed by enforced habitants to redeem somewhat the horrid conditions of their existence. Geographers of great experience† have deduced from the present state of Sinai that the land has dried up: that the rainfall

THE ANCIENT
RAINFALL.

* Petrosus est, raro habet terram. (Antoninus of Placentia, § 38, c. 570 A.D.)

† Professor E. Huntington in "Palestine and its Transformation"—a very interesting book.

was once much greater than it is to-day. Our impressions are directly contrary ; but, of course, neither position is capable of proof.

Professor Huntington believes that in this part of the Near East there has been throughout history an alternation of irregular periods of comparative moisture and of drought ; these can be argued partly from the migrations of peoples whose movements would be enforced by the drying-up of their old pastures, partly from the signs of settled cultivation during certain limited periods in what at other times we know to have been desert. The descent of the Patriarchs into Egypt would thus indicate a change from conditions when life in Southern Palestine was easy to those under which it was impossible ; the growth and prosperity of the now ruined cities of the Negeb would denote a century or two of good rainy seasons in the desert. It would, perhaps, be unreasonable to ask what increase in the present rainfall is necessary to satisfy Professor Huntington, but from the tone of his book we judge that he would require a considerable prolongation of the spring rains of late February and March. It is, indeed, the failure of these spring rains that so often brings to nothing the feeble agriculture of the Beduin. Sinai to-day gets a heavy rainfall in winter, usually quite enough, were it only distributed over a longer period, to ensure a satisfactory crop. The fault from the farmer's point of view lies not so much in the quantity of rain that falls as in its limitation to the coldest months of the year. Our opinion is that, broadly speaking, these climatic conditions have been always the same, and that any agricultural prosperity the desert has known was due not to any change in them but to the

THE EARLY
PERIOD.

greater adaptability of the then inhabitants. We have, we think, made it clear that at no time prior to our era was there any period of settled occupation in the desert. There is no evidence of a Stone Age. The "tells" and city ruins so common throughout Palestine and North Syria cease abruptly on the north fringe of the Negeb ; except for Tell el Ain el Guderat not one exists south of the Beersheba plain. In this early period, therefore, there were no towns, and the beggarly remains at Muweilleh are enough to show that life in the desert then (and presumably, therefore, the condition of the desert) was the same as it is to-day. In the Greek period, Khalasa and Abda guard the Nabatean trade-route, but offer no better an argument for the fertility of the surrounding country than the Government station of El Auja at the present day. It is only when we come to the Byzantine period, with its towns, its villages, and its scattered farms, that we need serious arguments to combat Professor Huntington's conclusions.

We believe and shall attempt to show that the prosperity of the Byzantine Age was wholly due to the conservation of the normal water supply and to improved agricultural methods. The towns and homesteads STORED WATER. of the Byzantine Negeb relied entirely, as to some extent does modern Jerusalem, upon stored water. A few had wells, but even there the cisterns were no less important. Esbeita, where there is no well at all, has as many caves hollowed out below it as it has constructions above; each house, on the average, had two cisterns; every street was graded down to a catch-pit; every courtyard and roof, even the flat ground outside the town, fed some underground store. Along the main roads huge pillared cisterns were excavated (*see* Plate VIII, 1), usually at the foot of a rocky hill, along whose side ran a rough trench or low catchment-wall to lead the rain-water to the tank's mouth. Similar cisterns were cut by the scattered farms, and in the upland pastures, as at Khoraisha behind Ain Kadeis, where the tank, whose roof is supported by a single massive pillar (*see* Plate XXIII, 1), is filled by a tributary of the Wady Khoraisha. At the time of our visit this *haraba* had received no fresh flood for two years, but still contained many feet of water and supplied the flocks of all the Arabs for miles round; since our visit the torrent has come down again and filled the cistern to its brim. There are many such *harabas* in the country and, when the catchments are maintained, Arab tradition seldom speaks of one running dry. There can be no question that for domestic purposes the Byzantines relied entirely upon stored water; it is also certain that the normal winter rains of to-day would suffice to fill their cisterns, that the spring rains would generally serve to replenish them, and that the water so stored in these huge and innumerable reservoirs was enough to supply men and cattle until the rainy season came round again.

A striking feature of the Byzantine houses is the absence of wood. Wooden doors there must have been, but even the smallest houses were SCARCITY OF WOOD. floored with stone slabs and roofed by ponderous arches carrying a flagged ceiling; even the cupboards were niches in the wall with stone shelves. Obviously there was no timber in the country which could be spared to make cottages of the raftered type common in the pine and poplar districts of Syria or in the palm-tree oases of Central Arabia and the Nile Valley. Again, although Sinai is a limestone country yet we find the Byzantine builders going to great inconvenience to avoid the use of lime; they only built with it when absolutely necessary, in water-reservoirs and the like, and even then they preferred where possible to hew out of the

solid rock. This sparing of lime must point to a scarcity of fuel. Had skilful agriculture been aided by an increased rainfall during the centuries of Byzantine prosperity we should certainly have expected a more abundant stock of both wood for fuel and building-timber.

Another argument can perhaps be based upon the present level of the water in Byzantine wells. The greater number of these have been filled up, but where they have been kept clean and are in constant use the
 OLD WELLS. water rises, so far as one can judge from the masonry of the wells, to the ancient level. Had the country got drier one would have expected the water-level to have sunk considerably, even if the wells themselves had not required deepening ; but nowhere is this the case. At Khalasa, Bir Birein, and Bir Hafir, for instance, the water is fairly near the surface. The same argument is supported by the very different conditions of the well at Raheiba.* Here the diggers had to go down three hundred feet into the rock before they tapped a spring—good proof that when the Byzantine town was built there was no greater supply of surface water than there is to-day. The great well was cleared out a few years ago and water found at its original level, but the Beduins got no profit from their work. The great depth was too much for the strength of their frail ropes, so they returned to their cisterns, and travellers are fast filling up the well again by dropping in stones to hear the boom of the waters in the bottom of the pit. The history of Raheiba was repeated at El Auja when the Turkish Government cleared out one of the town wells and found plentiful water at the old Greek level. They were so pleased with the discovery that they brought a steam-engine to pump it up, characteristically ignoring the fact that an engine requires fuel. The absence of the latter caused the experiment to fail.

The water store-pits find their complement in the many underground granaries, intended doubtless to contain and conserve the surplus corn of a successful harvest. These granaries are everywhere frequent, and
 GRAIN STORES. when lined with masonry are generally mistaken by travellers for water-cisterns. The similar pits made by Arabs in hard soil, with no stone lining, or burrowed out in the rocky sides of a wady and walled up when full, keep barley, wheat, and millet in good condition for years.

* The digging of this well has been attributed to Isaac, but it is more likely to have been sunk by the Byzantines to supply the bath-house that stands by it.

The elaborate terracing system of the Byzantines, which turned to account the natural filtration of the rainwater through the earth, was the main secret of their agricultural success. Hedges of tamarisk were planted
 TERRACES AND along terrace walls and round fields (*see* Plate II, 1, a landscape
 HEDGES. near Khalasa) at once to bind the light soil, to break the force of the winds, and to attract moisture. We noticed that wherever these terrace walls are preserved, and especially if their hedges yet remain, there the modern Beduin prefers to sow his corn and there the crop is in best condition. The use of tamarisk for hedgerows is perhaps one more sign of the prevailing drought of the country, for it is one of the few shrubs which, without irrigation, will withstand the heat of summer and autumn in the desert of to-day, and probably that same hardihood recommended it for the same climate in Byzantine times.

But while the terrace walls kept for the soil the benefit of winter rains that nowadays run to waste, the iron ploughshare of the Byzantine drove a far deeper furrow than does the twisted branch with which the poor Beduin scratches the surface ; the grain was nearer to the underlying moisture, and was better sheltered from the heat that now scorches its shallow roots. We believe that to-day, with ordinary methods of dry farming, the Negeb could be made as fertile as it ever was in Byzantine times ; only, with so many better parts of the world's surface waiting to be reclaimed, it is not worth while. In estimating that past fertility we must remember that, of the wide stretches of old plough-land still visible, not more than half would be sown in any one year, and that even then this half might in spite of all care fail as often as not of its yield. It was because the crop was at best so precarious that the area of cultivation was so great, in order that the surplus of favourable years might be stored in the many underground granaries against the lean years to come. We know, too, that upon occasions corn was imported out of Egypt.

To sum up the processes of the Byzantine time, one may say that the Greek government found an unreclaimed desert—for no single terrace wall is
 of any other period than the Neo-Greek—and that it pushed roads
 SUMMARY. through it, and built forts and trading towns and castles along the roads ; and that private people penetrated far into the desert not for gain but in search of solitude and uncontaminated space for hermitages. These churchmen farmed their little steads, and sometimes husbandmen and herdsmen and the camel-men of the road huddled their tents or rough stone shelters around the monasteries, until there arose a village or hamlet about

each water-cistern. This in the north only, for near Kuntilla and Themed only gazelles and snails can find a livelihood. The written records of the time, recitals of pilgrims, and chance references in the pious lives of monks, tell us of the great and holy population of the desert. If, in addition, we had had preserved to us the account books of the merchants, or the sailing lists of the Red Sea ports, we should have a complete picture of the Southern Desert under Byzantine rule.

The end of it all came suddenly. The fears of the central government had forbidden arms to the provincials. Heraclius had drained away the garrisons of the Empire for his Persian campaigns : without hands the effete fortresses that survived a Beduin raid could not withstand the organized forces of Mohammedanism. The persecuted Jews threw themselves into the hands of the more lenient Arabs : the equally persecuted Monophysites and Jacobites looked on at the passing of official Christianity without regret. Before the Arab power the cities of the south melted away. Once we thought we saw traces of resistance and bloody destruction : elsewhere the stoppage of trade no doubt put an end less painful but equally abrupt to the life of the community. The upland tent-dwellers inherited and neglected the farm-works of the Christian husbandmen. Such of the latter as remained, though they continued to use Gaza pottery and Byzantine coins, must soon have fallen into a Semitism of speech and life. The Mohammedans only admitted the communal existence there of such Jews of Akaba as had not been turned into apes for despising the Sabbath. To these, as to the great Monastery of Sinai, Mohammed is said to have given a charter. The rest of the country was converted to Islam, and became the abandoned wilderness of to-day.

It has had little or no history since. In the days of the Arab sovereignty, when Egypt and Syria were at peace or war in alternate decades, North Sinai acquired its present strategic importance as the most defensible frontier any country ever possessed. The coast road then, and in the time of the Crusades, became a well-trodden highway of commerce, while the pilgrim road from Suez to Akaba represented the religious interest. The interior of the country was not visited by historians. Once Amaury of Jerusalem, in trying to cut off a threatening move through the "Desert of the Children of Israel," marched south from Gaza till he came to a place which he recognized as Kadesh-Barnea. Unfortunately, he recorded no details of his discovery. On two occasions at least Arab Sultans also crossed by unusual routes. Once Saladin

THE ARAB
CONQUEST.

found the coast road blocked to him, and Renaud of Chatillon exercising wild activities in Kerak. He therefore marched with some thousands of men south of the pilgrims' road to Themed and Akaba, and thence slipped through to Damascus by way of Maan and the Syrian pilgrims' road.* Nearly a century later Baibars marched along the Shur road by Hassana to Muweilleh, and then by Nagb el Ribai (Petra) to near Shobek.† He had only a few men with him, and suffered from lack of water on the road. Since the time of the Crusades, Sinai has been stirred up by Turks and Egyptians, and by Napoleon, but without any very exciting incidents. Of late years it has been under Anglo-Egyptian control, and has fulfilled its rôle of buffer-wilderness in comparative peace, except for difficulty in checking the tendency of certain large boundary pillars to travel westwards.

* This has been noted by Clermont Ganneau in the *Revue Biblique* for July, 1906.

† Cf. Quatremère in *Journal Asiatique*, 1835, tome xv, pp. 31-34.

CHAPTER III.

THE DARB EL SHUR AND THE NORTHERN TELLS.

When those long caravans that cross the plain
With dauntless feet and sound of silver bells
Put forth no more for glory or for gain,
Take no more solace from the palm-girt wells.

North Sinai a thoroughfare : Holland finds a road from Egypt to Muweilleh : Between Hebron and Beersheba : Khalasa : An early fort at Raheiba : A cistern : Wells at Bir Birein : A fort there also : Ras Seram : Muweilleh. THE NORTHERN TELLS.—Abu Hareira : Abu Irgeig : Tell el Seba : Tell el Sawa : Khirbet el Watan : Khirbet Hora : Tell el Milah : Imshash el Milah.

I.

The Darb el Shur.

By virtue of its position, Northern Sinai has always been the thoroughfare of Asia and Africa, or, more particularly for the historian, of Syria and Egypt.

ROADS ACROSS THE DESERT. For this purpose use has been made at various times of three great roads. One of these, the most favoured commercially, is the northern coast road by Gaza and El Arish. Another, used sometimes for military purposes in the Crusades, was the southern route by Themed, Akaba, and Maan ; parts of this second route seem to be hinted at in the Book of Exodus as the main route of the migrating Jews. The third great route, known to us as the Darb el Shur, and made famous by Abraham and Isaac, ran from Hebron direct to Egypt, without touching Gaza or the Mediterranean. It must have had particular attractions when the northern route was closed by unsympathetic aliens holding the sea coast of Palestine.

The scarcity of settlements and water-holes on the possible lines for such an inland route makes the search to recover its stages not a hopeless one.

A LIMITED CHOICE. There is a strong *prima facie* probability that its course remained the same from the earliest times throughout the Greek period to the present day, and that if we can combine remains of all these periods into one great road we shall have found the Patriarchs' way into Egypt. The Rev. F. W. Holland followed up such a route, tracking his

quarry by the water-holes. He showed lines from the Suez Canal quite suitable for a tolerable party, coming by various groups of water-holes as far as Jebel Muweilleh. Baibars, the Sultan of the thirteenth century, followed this road to Muweilleh, and names water-holes among those recorded by Mr. Holland. However, this district was outside our survey; we therefore accepted Mr. Holland's evidence *en bloc*, as leading to an eminently reasonable conclusion, and set ourselves to find a decent route from Hebron to Muweilleh.

Naturally, we took the existing one, which every Arab knows, though few pass along it now save on tribal business. The days of trade-caravans between the merchant princes of Syria and Egypt have passed away. We took this dead highway, however, and looked along it for road-stations or wells or engineering works to mark its use in antiquity. It begins at Hebron, a gateway of Jerusalem and Judea, and runs to Beersheba. This part lay in settled country, then as now, and does not need discussion. Beersheba is a natural watering-place for one accompanied, as Abraham was, by his own nomad clan and its due property of sheep and camels. The wells lie in a wide rolling plain, not ill-watered, with forage enough at most seasons of the year, and a little to the east was Sheba, a fortified Canaanite town, held, perhaps, in Abraham's time by Abimelech, where provisions for the way could be bought by passers-by.

From Beersheba the road runs down to Khalasa, where it cuts the Gaza-Petra or -Akaba road. We have no proof that Khalasa existed before the Greek period, when it was a Nabatean town dependent on Petra; but the knowledge of its easy and constant water supply may well be older, and in the present special circumstances of the ruins evidence of early occupation would remain undiscovered. From Khalasa the road runs westwards, and is now marked neatly enough by the remains of tamarisk hedges of Byzantine period. It crosses a low ridge and then runs along the broad and fertile valley that leads down to Raheiba from the north. About two miles before it reaches the Byzantine ruins the track passes close to the foot of a conical hill which juts out from the limestone cliffs, where their line is broken by the mouth of a tributary wady; and on this hill we found a small fort or watch-tower, whose remains are known to-day as El Kasr el Raheiba. (Plate VII, 1.)

AN EARLY
BLOCKHOUSE.

The building was a little rectangle, with chambers at the south end, and an open courtyard with a double row of chambers on the north, where probably the entrance once had been. We divined

so much from the very wasted and encumbered foundations of dry rubble—the walls were rough and undressed—which now alone mark the site of the building (Fig. 3). On the surface we found fragments of late pottery scattered about; but many of them fitted together, and they obviously belonged to one vessel broken on the surface after the destruction of the building. After hunting round very carefully we found on the hill-slopes some earlier sherds, in particular two distinct pieces of fine ring-burnished hæmatite-stained ware, of a sort ascribed by Macalister to the Second Semitic period (1800–1400 B.C.), but certainly also in use some five hundred years later. These early sherds, interpreted in conjunction with the lack of Byzantine material, must be taken to prove that the building was a little fort or watch-house set here to guard the road, perhaps at the time of the Patriarchs, or perhaps during the Red Sea adventures of Jewish kings, Solomon or Jehoshaphat. The pottery is Syrian, an argument against Raheiba having been an Egyptian outpost.

The road, after passing the Kasr, avoids the Byzantine town on the slope, but continues on the valley bottom, not far from the great well, three hundred feet deep, which some would like to identify with the watering-place made by Isaac for his flocks at Rehoboth—a name which appears to-day at a point near Khalasa. A stone-lined well on such a scale as this of Raheiba is, of course, very unlikely to have been the passing labour of a nomad chieftain.

The road becomes clearer after passing Raheiba, for it enters on the desert proper, where it has not been ploughed up, in its course south-south-west towards Auja. Auja, however, is only a Byzantine site, and the road passes two or three miles to the east of it in the wide plain out of which the Wady el Abiad runs towards Esbeita. Here the road is to-day a broad well-marked ribbon of many parallel tracks. We photographed it as it rose to a slight ridge of limestone in which a large rock-reservoir had

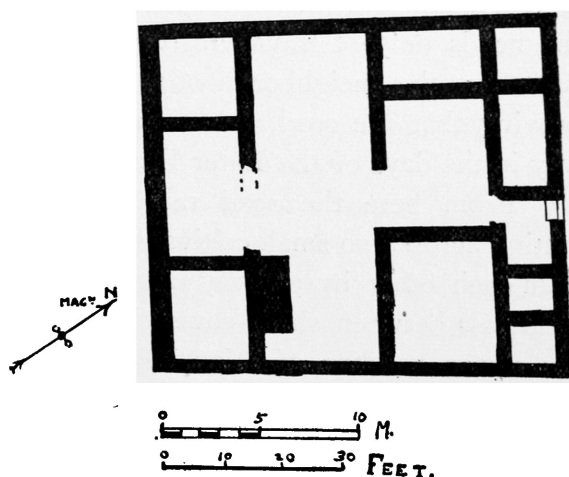


FIG. 3.—EL KASR EL RAHEIBA.

been hewn (Fig. 4). This reservoir,* lying to the east of the road, had been recently cleared out, and the ground about was littered with Byzantine pottery, for, like most of the rock-cut cisterns of this country, it is of Byzantine date; but its presence here, to serve the needs only of travellers (there were no house ruins in the neighbourhood), is of interest, as proving that the road was still an important highway in the days of the Later Empire.

From here the road ran nearly due south, cutting across two small cultivated wadies separated from each other by a stony ridge, and thence by a little pass between shrub-covered slopes on to the shingle plateau dividing the upper reaches of Wady Abu Ruta from the Wady el Hafir. The descent on the Hafir side of this plateau bears unmistakable signs of artificial grading to make its slope easy. The road passes thence across the Wady el Hafir, and over broken country, past a curious stone construction of long rough walling on a hill-side—a water catchment—until over a rise it commands a view of the valley and wells at Bir Birein (Plate VII, 2, and Plate VIII). The date of the wells is of course impossible to determine.

AN EARLY
BLOCKHOUSE. North of them are plentiful Byzantine remains; but to the south-west of them, on the crest of the high rocky bank that limits the valley, we found ruins of a rude building that appeared very

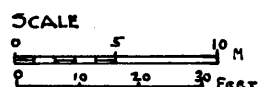
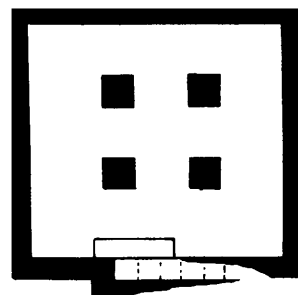


FIG. 4.—ROCK RESERVOIR
NEAR BIR BIREIN.

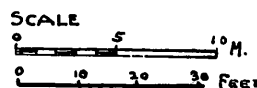
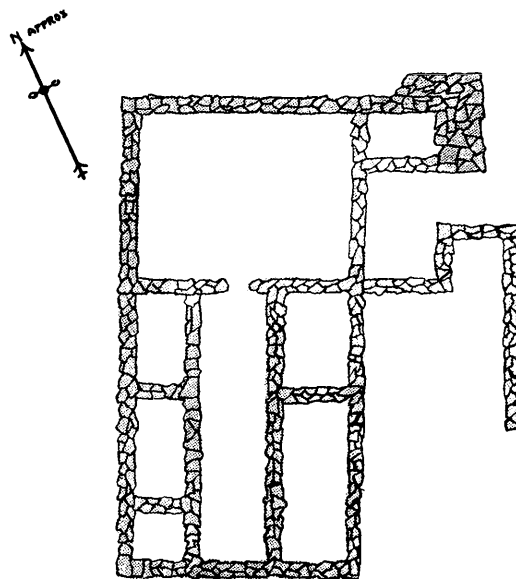


FIG. 5.—SKETCH PLAN OF BUILDING ON HILL-
TOP COMMANDING BIR BIREIN.

* The pit was 12'30 m. \times 11'60 m. (40 ft. \times 38 ft.), and is now 40'20 m. deep. The roof, which has fallen in, had been carried on four square columns cut in the chalk; there was a stepped

ancient (Fig. 5). It is in quite hopeless condition, and our sketch plan is as bad. All the walls are of rubble, dry built. The square tower and *dowar*, or stone circle mentioned by Palmer, still exist, but are obviously the stone framework of brushwood huts, and the pottery about them is of the latest Byzantine or early Arab period. The larger building of our sketch plan (Fig. 6) is more interesting, and a very little pottery, found below it on the hill-slope (the probable position for early remains), was some of it hand-made, some ring-burnished hæmatitic ware, like the wares of the Kasr el Raheiba. The ground plan of the building above is not distinctive: it may be an early building: it may have been modified in Greek times, or then only built on the site of an early one. Excavation could do nothing in such a rubbish-heap of stone. In any case the point is not important, since the pottery is sufficient to show us an early fort on the hill-top like that at Raheiba, of the same period, and no doubt part of the same system of police patrol.

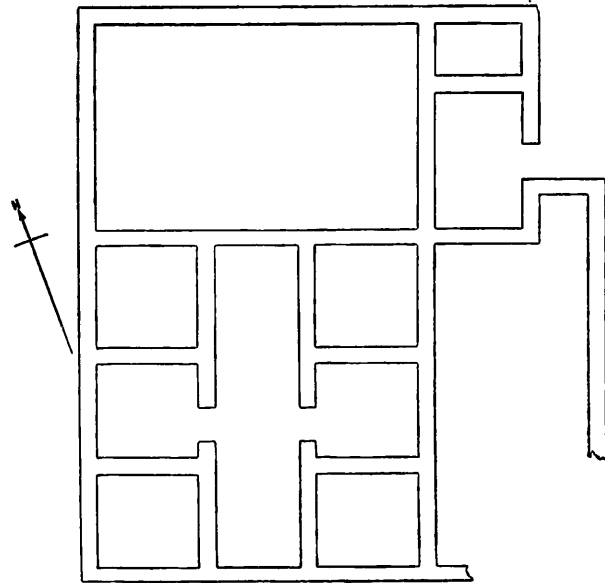


FIG. 6.—SKETCH PLAN OF EARLY BUILDING ON HILL-TOP, BIR BIREIN.

From the wells the road skirts the gravel mounds on the south-east of the wady, and cuts across the plains of the broad upper valley, past terrace walls and hedges of the Byzantine period. Gradually the ground gets more stony, and the path, still clearly marked, begins to ascend some low limestone hills leading up to a regular pass between two peaks crowned with stone cairns. It was curious to note how the friction of feet has polished to a creamy whiteness, as smooth as fine marble and as slippery, the larger rocks that lie flat in the path. At the top of this pass we came suddenly to a descent like a steep gully into a broad flat plain, ringed

descent to it on the south side, whilst above the pit a ditch and bank of chalk drawn round the lower slope of the ridge caught the rainwater flowing off the hill-side and led it to the cistern.

about with a beautiful amphitheatre of cliffs and steep mountain slopes, but open on the west for many miles ; across the wide valley bottom the ancient road strikes direct for Ain Muweilleh (perhaps ten miles away), leaving the spring of Kossaima a couple of miles to the south. From the foot of this

descent a track, and a very difficult one at that, runs straight to
MUWEILLEH. Ain Kadeis. By the roadside, near the water pools at Muweilleh,

are the house ruins described in Chapter IV. Thus from Khalasa at easy stages on the way we were able to find stations—Raheiba, Bir Birein, Muweilleh—all of a Semitic period, which prove a considerable traffic passing then between Hebron and Egypt by this inland route. Our sphere did not extend beyond Muweilleh to the west, and so we contented ourselves with the notes of Mr. Holland for the continuation of the way ; the

more readily as from the top of Jebel Mushrag we could distinctly
JEBEL YELLEG. see the great road running “down into Egypt” across the flat basin of the Wady el Arish towards Jebel Welal, and Jebel Yelleg visible on the distant sky-line (Plate IX).

II.

The Northern Tells.

In the Southern Desert there are scarcely any sites of high antiquity. The Tells, the artificial mounds that in Syria mark the ruins of ancient cities, are frequent in the Philistine Plain, but cease with its southern limits. In the open country between the coast and Beersheba, and to the east of Beersheba itself, there are many more or less imposing mounds, but beyond the fringe of stony and barren hills that divide these fertile lands from the desert proper the very word has lost its significance, and from here to the Red Sea the little post of Wady Guderat is the only true “Tell” that we could find.

Since the former survey of Palestine did not include quite all of the plain of Philistia, a few of its ancient sites fell within the limits of the present survey and are shown on the new map. Not all of these were visited by us, but a mere visit can give very little information ; in their origin the tells must date back at least to the Early Bronze Age, but the surface remains illustrate for the most part only the latest period of their occupation. Excavations have

already proved that the material civilization of Palestine remained at a consistently low level down to Roman times ; buildings are of the roughest description, sculpture is unknown, inscriptions are very rare, metal-work can boast no artistic merit, and even pottery in most periods compares ill with that of other countries. It is therefore not likely that much can be learned from the surface of the ground ; we must be content to find evidence for an approximate date which is almost certainly not the earliest and quite probably not the latest in the history of the occupation of the site.

Tell Abu Hareira, on the southern road from Gaza to Beersheba, is a very large mound, partly natural but artificially scarped, that rises over the Wady Ghazza ; it consists of a great citadel mound and a lower-town mound with an earth rampart. On the top of the citadel is a shrine of the saint, and the whole surface of the tell is covered with Arab graves. There were quantities of Arab potsherds littering the ground, most of them probably due to offerings deposited at the graves, for there were no signs of actual occupation in Arab times. On the slope of the citadel were found a few sherds of Canaanite pottery of the pre-exilic period. The mound is one of the finest in the south country.

On the northern road eastward from Gaza, some five miles west of Beersheba where the track crosses the Wady abu Irgeig, are two very small tells side by side.

Round them are the remains of a large Byzantine village, whose cemetery lies a little to the north of the road. Both the mounds had been capped by late buildings with roughly built rubble walls and floors of rubble and beaten earth. The pottery in and round these buildings was Hellenistic, with a few Byzantine sherds intermixed. No earlier pottery was visible, though the mounds themselves were undoubtedly of early date.

Some three miles west of Beersheba, on a promontory of fairly high ground between the Wady el Seba and a tributary that here joins it from the north, stands a lofty tell known as Tell el Seba or Tell Imshash el Seba. (Imshash=Wells). The top of the promontory seems to have been occupied by the lower town which was defended by the two torrent-beds and by the citadel which stretched from bank to bank behind it. East of the citadel the ground is much broken and covered with mounds and stone ruins ; some of the former may be early ; the latter are Byzantine and include a church of considerable size (the foundations only remain) with a building at its east end ; the ruins are those of a large village,

not of a town. About half a mile to the west, in the wady bed, is a well, covered over with a modern well-house; during much of the year water can be found in shallow pits dug in the wady. A number of native huts occupy the site of the Byzantine village, where coins and inscriptions have been found; the Arabs showed me a coin of Quietus and a tombstone of one Stephanus dated **TOY ΔΚ ΙΝΔΣ ΒΙ** (probably 550 A.D.).

The pottery on the top of the great tell was nearly all Seleucid; there was nothing Roman or Byzantine, but there were a few sherds of earlier date. On the east side, some twenty feet below the top of the mound, walls of rough rubble showed upon the surface, and in the soil below these a certain amount of pottery was found, all of early date; several characteristic rims, a jar handle,* and a fragment of poorly burnished red ware belonged to Macalister's Third or Fourth Semitic periods, and should be dated between 1200-800 B.C. Further down a few fragments were found which might be of earlier period, including some hand-made pieces. The height at which unmixed Semitic pottery occurred points to a very heavy substratum of pre-Hebrew culture. On the opposite bank of the wady, now cultivated land, were found a few painted sherds of the type found at Khirbet Hora. In Joshua xix, 2, Beersheba *and* Sheba are mentioned together as being in the lot of Simeon. As we have seen, Beersheba possesses no tell or sign of ancient occupation; probably in early Semitic times the settlement or city was at Sheba only, this being the modern Tell Imshash el Seba, and the famous Beersheba, the Well of Sheba, lay three miles west of the city, out in the wide pasture grounds to which nomads such as Abraham would bring their flocks when the southern pastures failed—just as the Arabs of the Negeb to-day drive their flocks northward to Tell Imshash when the drought has left no greenstuffs on their barren hills. It is not unusual to find an ancient town near to but not enclosing its water supply (*e.g.*, Raheiba and Abda), but in this case Sheba could get water enough from its water-holes and wells in the wady. Perhaps the very fact that Beersheba was out in the country away from the jealous town, and open to all comers, gave it its importance for the wandering ancestors of the Jews. If, as seems certain, Beersheba took its name from the then existing town of Sheba, the modern name Bir el Seba, "The Seven Wells," must be a

* A handle of this type occurred in Beth-Shemesh Tomb 4, at the period of the Jewish monarchy.

mere corruption. Since eight wells are known to exist, it has no ground in fact or in tradition.

Tell el Sawa, some eight miles east of Tell el Seba, properly speaking does not deserve its name ; it is a fairly high natural hill, one of the range that shuts in the rolling plain of Seba on the east. The north end of TELL EL SAWA. the hill rises in a steep knole ; its south end tails away into a narrow ridge, and on this lower level are the remains of buildings. Under the knole is a large square building, clearly a monastery, with a church on its north side and cells lining the south. The church had one apse only, that of the central aisle, the side aisles being square-ended, and the floor was of plain white mosaic. North of this were other ruins of houses, and a small square tower of two rooms with very solid walls rising to a second storey; this must have been a military guard tower ; but the whole place is small and unimportant. There are several cisterns on the hill-top, and on the east slope traces of buildings, caves, and terraces. The tower is of the usual Byzantine limestone, well dressed, some of the blocks having drafted edges, and the apse of the church was lined with the same material ; but all the rest of the walls were of a solid flinty conglomerate (of which these hills are formed), deep rust-red in colour and enormously hard—the blocks into which it is split are often a yard square and as much as two feet thick, regularly cut and well trimmed to a face. There are no traces of earlier occupation, and no such artificial mound as would justify the name “ Tell ” applied by local custom to the site.

Some four miles to the west of Tell el Sawa, near the Seba road, is a small mound overlooking a cup-like valley in whose sides are several rock-cut cisterns or water-holes ; it is known as Khirbet KHIRBET WATAN. On the surface are visible walls of limestone rubble, one faced with cement, and quantities of Roman and Byzantine potsherds, showing that there was once a large farm or small hamlet, easily accounted for by the proximity of water and the fertile character of the surrounding plain. Below the surface, however, were found a few Semitic fragments including some red-faced ware with finely drawn horizontal bands of pebble-burnishing that should belong to the Second Semitic period (c. 1800–1400 B.C.). This, too, was at best a very small settlement ; but it is perhaps of interest to find at that early date isolated homesteads side by side with the great defensive city mounds, witnessing, one may suppose, to a settled and peaceful occupation of the country.

A little to the north of Khirbet el Watan, on the summit and western slope of a fair-sized hill, lie the ruins known as Khirbet Hora. On the surface this site much resembles that of Tell el Sawa, though it KHIRBET HORA. is on a considerably larger scale—a collection of scattered buildings all of squared blocks of red flint conglomerate, littered with Byzantine potsherds and a few fragments of early Arab glaze. The houses were rectangular, with courtyards in the regular Byzantine manner, and rock-cut cisterns were everywhere; no church ruins could be distinguished. To the north-west of the main site there was a small hillock of decomposed limestone which contained a lot of pottery, and here, mixed with Byzantine sherds, there occurred a few examples of ring-burnished ware, handles and rims, of the later Second or Third Semitic periods. A more interesting discovery was made on the site of the Byzantine town itself. At the north end of the town an attempt had been made in recent times to clear out an old cistern, and the surrounding soil had been a good deal disturbed in consequence; at another point on the south-east the rains had partly denuded the edge of the hill outside the line of buildings, and sweeping away the surface soil had exposed one or two patches of the underlying gravel. In this gravel, and in the upturned soil by the cistern, mixed up with later sherds, were found small fragments of hand-made pottery with geometrical patterns painted in red or black on a light surface—usually on a hard ivory-white slip over a somewhat coarse reddish-grey body.

[The authors ask me to add a few words about the Hora sherds, of which they have submitted some thirty, mostly minute, fragments. Out of this number, four seem to me wheel-made, and two are rims of bowls or very large jars in coarse grey ware, washed with red and painted with plain bands on the interior face and the rim: one has plain brick-red bands, the other purplish-black. Both rims are rolled over externally. So far as I can see, these rims should belong to vessels of the Second Semitic period, and so also may a tiny fragment of red, unwashed, wheel-made ware, ornamented with finely-combed festoon incisions, and another fragment, wheel-made, with faint purplish bands.

The rest of the sherds, all painted except one, a red unwashed and unslipped fragment, ornamented with a coarsely-combed festoon, are hand-made, and for the most part slipped, *i.e.*, washed over before fixing. The designs in red, purplish-black or ochre, seem to have been, on exterior faces, vertical bands or combinations of these with lozenges and triangles, often

chequered and, on interior faces, horizontal bands. Both faces of one vessel were sometimes painted. The fragments seem to belong mostly to jugs or cups, but they include no rims, bottoms, or handles. The designs are such as are more proper to the Second Semitic, and even the Third Semitic, ware of Gezer than to the First or the Pre-Semitic ware. One fragment, finely slipped, painted and polished and showing vertical bands of purplish-brown alternately chequered and fretted, is of typical Third Semitic design; but it is hand-made. Were it not for the fabric, I should have no hesitation in referring all these fragments to the Second and Third Semitic periods; but in view of the fact that they are hand-made, and show designs not dissimilar from the early painted ware of Carchemish, which is of late Neolithic or very early Bronze Age date, I feel a little doubt. Nothing quite like them was found at Gezer, but since the pre-Semitic ware there is farther removed from them than are the later wares, and it is a far cry to Carchemish, I incline to regard the Hora sherds as a local fabric of late Second and early Third Semitic period (say not earlier than the middle of the second millennium B.C.), whose early characteristics are due rather to the remoteness of the site, which has retarded the adoption of the wheel, than to prehistoric date. Hand-made sherds found in Jerusalem, and decorated in late Third Semitic style, resemble these Hora sherds in types of pattern, but are of different clay. It looks as if South Palestine continued primitive methods of fabric to very late times.—D. G. H.]

Tell el Milah is a large artificial mound, not very lofty, in shape a regular oblong, lying east and west, with a somewhat lower "annexe" at its western end; the top is flat, the sides are fairly steep. South of the mound, and separated from it by a broad shallow depression now dotted with Arab graves, is a large straggling ruin, a collection of houses built in flint conglomerate, all of Byzantine date. This may support the identification of Tell Milah with the Malatha or Malis (Eusebius) of Byzantine writers. In the hollow to the north of the mound are three wells which give water all the year round: others are said to exist but have not been cleared, and the local Arabs, fearful of trouble with other tribes should their water supply be too invitingly copious, have no wish to clear them.

The summit of the tell is occupied by a large rectangular building with walls dry-built of blocks of flinty conglomerate and of rubble (Fig. 7); these are now level with the soil and in many places cannot be traced. The building measures 84·00 m. east by west by 56·50 m. (277 ft. by 202 ft.). No external

buttresses were visible. An inner wall runs parallel to the heavy outer wall, the distance between them being on the north (and south?) some six metres (about 20 ft.), on the east ten metres and a half (34 ft. 6 in.), and on the west eighteen and a half (61 ft.). The two walls are joined at frequent intervals (generally of three or four metres) by cross walls which divide the intramural space into a series of chambers. The centre of the enclosure sinks to a slight hollow and shows no signs of building; it may well have been an open courtyard. Arab graves, of very recent date, cover the whole top of the hill. Over the surface, which was much disturbed by the gravediggers, were strewn Byzantine potsherds mixed with a few of earlier (Semitic) date. On the sides of the hill the earlier sherds predominated and included ring-burnished wares and fragments of broad-rimmed bowls, apparently of the Second and Third

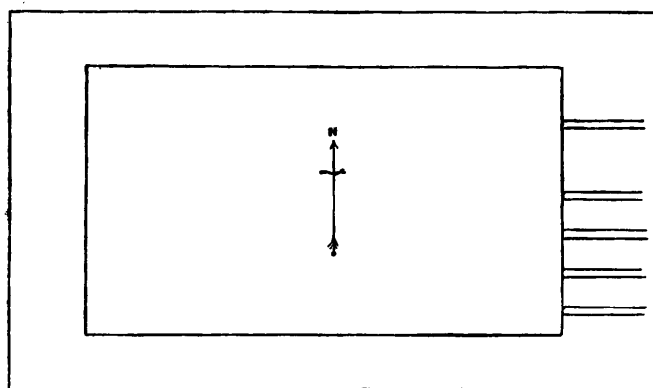


FIG. 7. FORT ON TELL MILAH. 1 : 100.

Semitic periods, perhaps 1500–1000 B.C. The main point of interest was to decide whether the walls of the fort went with the earlier or the later pottery—whether they were those of a Byzantine stronghold or of an older Canaanite population. Without excavation this could not be definitely ascertained. The material of

which the walls were built was that used in the late buildings of Tell el Sawa and Khirbet Hora, but it is the material that would naturally be employed in this district at any period of history, for it lies most nearly to hand. Scraping a hole a couple of feet deep against the outer face of the wall we found Byzantine pottery exclusively in the upper stratum and a few fragments of earlier ware lower down. The evidence was inconclusive; perhaps the analogy with Imshash el Milah, pending proper excavation, may turn the balance in favour of the earlier dating of the Tell Milah fort.

Between four and five miles west of Tell Milah, on the north bank of the wady, was a small and low mound, not dignified in the neighbourhood by the name of "Tell," though its artificial character and the ruins of which it is composed are sufficiently obvious. On the opposite bank are a number of water-holes, some of them

IMSHASH EL
MILAH.

stone-lined, called the Imshash el Milah, and these give to the ruins the only title they can boast.

The little mound is covered with modern graves (a woman was being buried there at the moment of our arrival) and this makes its examination less easy. One could see, however, that the place had been a small "Kala'at," closely resembling that of Tell Milah. There was the rectangular enclosure, longer north by south, with a fairly heavy outer wall and a row of intramural chambers against it; the outer wall was of large roughly-squared coursed blocks of flinty conglomerate, the inner walls were of smaller rubble. Some outer buildings were attached to the north face of the main fort but were too ruinous for their character to be ascertained. Scattered over the mound were a few fragments of Byzantine pottery, probably to be explained by the existence of some small ruins of the same date that lie close to the tell: it is quite possible that the Byzantines as well as the modern Arabs chose the ruins for their graveyard; but the bulk of the potsherds were early and included such fine examples of continuous ring—or spiral—burnishing as could only be attributed to the Second Semitic period (perhaps 1800–1200 B.C.). There could be little doubt that the building here was of the same date as the mass of the pottery about it, and that the few later sherds on the surface were of casual introduction; and that being so, it is difficult not to attribute the very similar building on Tell Milah to an equally early date.

CHAPTER IV.

AIN KADEIS AND KOSSAIMA.

But this is a question of words and names
And I know the strife it brings.
I will not pass upon any your claims.

- i. *Ain Kadeis*.—Conformation of the district: The two “plains”: Notoriety of Ain Kadeis: Visitors: Trumbull’s description: Our opinion on it: The springs, grass, fig-trees, bathing-pool. ii. *Muweilleh and Kossaima*.—The Kossaima plain: Ain Muweilleh: Kossaima. iii. *Ain el Guderat*.—Wady el Ain: Wady Ain el Guderat: The aqueducts: The great reservoir: The tell: The spring. iv. *The Antiquities of the District*.—At Ain el Guderat: The Arab remains: Byzantine things: A reservoir: A village: Roman pottery: The early period: The tell: Its plan: Pottery: Early graves: Kossaima: Muweilleh huts. v. *The Kadesh-Barnea Question*.—Not proven.

BELOW the Negeb proper, and divided from it on the west by a broad depression, is a mass of steep white hills, grouped in a cluster of peaks and ridges that have different names among the different Arab tribes, and from different sides. The westernmost part of the range (on the map called Jebel um Hashim) runs down from the central height in a spur called Jebel el Ain, and afterwards in a long broken chain of less notable hills extending to Jebel Muweilleh, a flinty peak some miles within the Egyptian border. This chain of foothills is important geographically, in that it divides two water-systems. To the north of it is a running-together of wadies into a plain about Kossaima, and to the south of it is another running-together of wadies to simulate a second plain, which modern writers have called the plain of Ain Kadeis (Plate X). This second plain is held in by considerable hills: on the east is Jebel el Ain, a rugged bow of cliffs in limestone and flint, with only one possible way over it; on the north is the watershed already mentioned, a procession of pointed hills; on the west and south there are no steep places, but rows of inconspicuous ridges, slowly adding up to a modest height. Looked at from these boundaries the contours of the lower ground fall flat, whereas in reality the whole surface is irregular, running up here and there into tolerable hills,

THE SOUTHERN
PLAIN, FALSELY
CALLED OF
AIN KADEIS.

and all seamed with stony torrent-beds. The soil is sandy, between stones, and there are only rare traces of ancient cultivation. The Arabs—husbandmen here without hope—still plough each winter a little of the further wady beds, and in wet years reap a harvest. But Ain Kadeis is the only water of the district, and that a spring on the westward slopes of the great mountain far up the Wady Ain Kadeis.

The name Kadeis* was so reminiscent of Kadesh-Barnea of the Israelites, that as soon as it was recorded of a spring it naturally loomed up in western eyes with an importance inexplicable locally. The Arabs know nothing of a plain of Ain Kadeis: to them the name is that of a water-spring in a small valley called after it, and the great area of low land outside the mouth of this valley is not a plain at all, or connected with its tributary wady in any way by name. Yet one party of travellers after another set out, either from Syria or from Egypt, with this obscure water-hole as their avowed object. Ain Kadeis is too small to water the flocks of other than the few poor families who live near it, and, as we found, too remote from all roads to come to the notice of such Arab guides as live at any distance. But this native ignorance was interpreted as deep-seated policy, and so foreigners came to believe that the spring had remained, from the time of Moses, still a holy place (we do not really know whether even Moses thought it holy)—some great head of water in an oasis too beautiful and too precious to be disclosed to Christian eyes. Its Arabs took on a sinister character: they became by degrees inhospitable, sullen, fanatical, treacherous, bloody. And yet all the time, had the world but known it, the place had been seen, measured, and described by Palmer on his visit in 1870,† with his usual minute accuracy and vividness. The account given by Rowlands, who was the first to see the spring in 1842, while mainly recording his personal emotions, tallied well enough with Palmer's in essentials; and there the matter would have ended, but that a Mr. H. C. Trumbull, an American, spent a single hour at the spring in 1882, and wrote round his visit a very large book, with fantastic descriptions of the valley‡ and

* Kadeis, in Hejazi Arabic, is a scoop or bailer used in the bath for purification. The Sinai Arabs use such scoops (of wood) to lift up water from a shallow well. It does not mean "holy," as Trumbull and other writers have assumed.

† *Desert of the Exodus*, ii, 350.

‡ We need not give measurements of the valley. They have been published admirably by Professor George L. Robinson, McCormick Seminary, Chicago, in articles in the *Biblical World* in 1901 and 1910. He gives a plan of the valley and springs, with photographs. His whole description is so clear and accurate that it may well be regarded as final.

wells. The work, however, was plausible, and has unfortunately been accepted by biblical geographers* as the authority on the district. As for the remainder of Trumbull's book, it is full of varied argument, often irrelevant, some philology, and a large confrontation of the views of everyone, good or bad, who had mentioned Kadesh-Barnea throughout the ages.

His account, which we had with us at Ain Kadeis, says (*Kadesh-Barnea*, pp. 272, ff.) :—

“ It was a marvellous sight ! Out from the barren and desolate stretch of the burning desert waste we had come into an oasis of verdure and beauty. . . . A carpet of grass covered the ground. Fig trees laden with fruit nearly ripe enough for eating were along the shelter of the southern hill-sides. Shrubs and flowers showed themselves in variety and profusion. Running water gurgled under the waving grass. . . . A circular well, stoned up from the bottom with time-worn limestone blocks, was the first receptacle of the water . . . the mouth of this well was only about three feet in diameter, and the water came to within three or four feet of the top. A little distance westerly from this well and down the slope was a second well, stoned up much like the first, but of greater diameter. . . . A basin or pool of water larger than either of the wells, but not stoned up like them, was seemingly the principal watering place. It was a short distance south-westerly from the second well. . . . Another and yet larger pool, lower down the slope, was supplied with water by a stream which rippled and cascaded along its narrow bed from the upper pool ; and yet beyond this, westward, the water gurgled away under the grass . . . and finally lost itself in the parching wady. . . .

The account in the *Homiletic Review* of April and May, 1914, by Professor Coborn of Alleghany Coll., Meadville, Pa., is not worth discussion.

In the *Revue Biblique* for July, 1906, the French Benedictines have done work as good as Professor Robinson's in accuracy and authority.

In *Z.D.P.V.*, vol. 37, part i, Dr. Kuhtreiber describes his visit made in March, 1912. His is the fullest and best account of Ain Kadeis in print, and we regret that ours was written before we saw his article. We supplement him, however, in some details.

Dr. Musil, in his heavy book on *Edom* (ii, pp. 176–181) gives good photographs of the valley, and a very poor description.

Of older writers one should mention Holland, who is faithful, and in particular the second letter of Rowlands. He was astonished at Trumbull's discovery, and, though in old age, set out at once to Egypt, visited Kadeis, and wrote him a simple account of his trip, published in the *P.E.F. Quarterly* for July, 1884.

* e.g., Hastings' *Bible Dictionary*, art. Kadesh-Barnea.

"There was a New England look to this oasis,* especially in the flowers, and grass, and weeds. . . . Bees were humming there, and birds were flitting from tree to tree. . . . As we came into the wady we had started up a rabbit, and had seen larks and quails. It was, in fact, hard to realize that we were in the desert, or even near it. The delicious repose of the spot after our journey over the arid gravel waste under the blazing mid-day sun was most refreshing. . . . Our Arabs seemed to feel the soothing influences of the place, and to have lost all fear of the Azazmeh. After a brief rest on the grass they all stripped and plunged into the lower and larger pool for a bath."

A note by Dr. Trumbull should in justice to him be reprinted with this extract of the text. He said: "In writing up this description from my hurried notes made on the spot, I find room for question at one or two points, as to the distance and bearings of the several wells and pools one from another, but I give the facts at these points as accurately as I can recall them."

As a general comment we can only say that this account is as minutely accurate in its measurements as it is inaccurate in its descriptive matter. The valley of Ain Kadeis is unusually naked, even among the valleys of the south country. At its mouth it is a broad, flood-torn wilderness of stone, about which a torrent-bed twists from side to side, shallow and spreading in the longer stretches, but cut twelve or fifteen feet deep through limestone shingle at the bends. In the side of the valley are the last remains of rough terrace-walling, and near by, a little to the north of the wady entrance on the sand-hills, we found ancient remains. There were eight poor ring-graves, some sherds of Byzantine pottery, and a few rough stone foundations that might in courtesy be called a farmhouse. These late Christian remains seemed to us probably to mark the highest level of the population of old Kadeis.†

After the entrance the valley quickly draws in and becomes, if possible, more stony than before. On each side the hills are very steep and bare, and shine painfully white in the glare of the sun. There is nowhere any green place, or any smooth ground, until the actual spring is reached; instead, great polished boulders have rolled off the cliff-sides into the stream bed, and at

* On this compare our photographs.

† Though Mr. Pickering Clarke, in the *P.E.F. Quarterly* for October, 1883, says "the city itself was possibly a Hittite shrine . . . from a city so important the whole district round would take its name." We will not print comments on this.

times half block the water channel with their huge bulk. In and out of such as these, over small and slippery stones, up and down the steep torrent bank leads the rough track to the wells. In all its length the Wady Ain Kadeis is a most unmitigated desert.

The springs themselves are made up of two or three water-holes under a cliff (Plate XI). From these flow out steady trickles of water, very good and sweet ("like sugar" say the Arabs), constant throughout winter and summer. They unite in a tiny stream which runs under the rocks, forming occasional pools, for about a hundred yards, and then comes to a stagnant and smelly end beneath a mighty boulder. The flow of water is a plentiful one for the needs of the few nomad households that now are the miserable population of the valley. Certainly they could not water there at one time all their little flocks for lack of room (our men brought our camels two by two), but in this dry country the smallest running water is a precious thing, and so Wady Kadeis, in spite of its lack of pasture and of smooth ground for camping, has always two or three families living in its side-ravines, and the local Arabs have profited by the opportunity of constant water to establish a graveyard on a hillock near at hand (Plate XII, 2). The goats of these Arabs, and their camels, continually driven to the well, have formed round it a patch of manure heavy enough to hide the boulders underneath, and to give root-hold to a little grass. This tiny plot, existing on sufferance of the winter floods, is the verdure that in Trumbull's eyes blotted out the sterile slopes around: just as the fig trees, from which his patience presently expected ripe figs, are two or three stunted roots of the uneatable wild sort, growing under cover of some larger boulders in the torrent-bed round a corner below the springs. The biggest of these bushes has old gnarled branches growing to more than a man's height, but the others are difficult to find* (Plate XII, 1).

Trumbull celebrates particularly the flowers of the valley, but they are only the common bloom of all the dry country, which flourish for the few days after rain till the sun's heat cuts them down. While they last, one who peers between the rocks throughout all Sinai will see a garden in what from a few feet off is blasted wilderness. Ain Kadeis, with its running water, is, of course, a little richer than most places at such times.

* Professor Coburn finds food for thought in the saying of his Arab that no man had ever planted those trees.

Lastly, the pool into which Trumbull's Arabs, after stripping, plunged so rashly to have a bath, is only about a foot or eighteen inches deep, and full of very large and sharp stones. Our guide also washed his feet in it.

II.

Muweilleh and Kossaima.

The chain of foothills, insisted upon in the beginning of this chapter as the watershed between the northern and the southern plains, is crossed by many paths. One or more ascends each saddle between the peaks, and THE FOOTHILLS. runs out into the northern plain between the mouth of Wady el Ain and Jebel Muweilleh. These roads are very easy ones, and the largest, which leads down direct upon Kossaima, has on its southern slope the footings of a ring-booth or two, and a few ring-graves of uncertain date. There is another path, more difficult, which passes from the valley of Ain Kadeis over the spur of Jebel el Ain, and descends into Wady el Ain not far from the mouth of Wady Ain el Guderat. The hills between the roads are striking little peaks, steep and sharp for the most part, curiously eaten out and furrowed by the sand-blast and the winter rains, very white, sometimes capped with a point of harder limestone scarped like a pyramid, sometimes rounded into huge half-drums, like clustered organ-pipes eighty or a hundred feet high.

The northern plain is a great contrast to its neighbour on the south. About Wady Ain Kadeis stretch great wastes of dry watercourses, winding among the sand-hills, and for the whole district there is only the petty spring of Ain Kadeis remote in a difficult valley. THE NORTHERN PLAIN. On the north of the watershed there are certainly some sandy stretches, and stony parts where limestone ribs and knolls crop out of the flat; but much of the country is earth capable of ploughing, and some of it quite fertile tilth. In place of the solitary Ain Kadeis are Ain Muweilleh, in a soft wady bed; Ain Kossaima, a plentiful running of water in the sand; and Ain Guderat, a great spring, not set in a dung-heap like Ain Kadeis, or sand-choked like all other Negeb springs, but bursting straight from the rock, and running down a deep green valley of lush grass in swift irrigation channels, or in a long tree-shaded succession of quiet pools many feet deep. This plain about Kossaima (which also seems to have no one local

name) runs from Muweilleh on the west to the foot of the great pass of Ras Seram on the east. In fortunate years it might be very fruitful; and in the worst seasons its crops cannot entirely fail, thanks to the irrigated valley of Ain el Guderat—the only large stretch of corn-land under running water which we saw in all the southern waste. These exceptional advantages, which make this plain the only readily-habitable spot in the desert, seem from the remains in it to have been as obvious to its old-time rulers as to the British administrators of Sinai to-day.

Ain Muweilleh* is a convenient starting-point in a description of the particular features of the district in detail. It and its hills are the western limits of the good land, and anciently it must have been the most thronged spring, since the old inland route from Egypt runs under the cliff-edge of Jebel Mushrag to the water, and climbs up the wady bank just beyond on its straight way to Ras Seram. On the east side a low limestone shelf borders the valley, and upon it lie a few rude ruins of an early period, to be discussed more particularly later on when we come to treat of the allied remains at Kossaima and in Wady Guderat. Below this limestone shelf and between its steep edge and the flint screes of Jebel Mushrag is penned the wady, a broad sandy bed full of deep-rooted tamarisk trees. The drinking water is little more than a group of shallow pools, green with slime, in the sandy bottom, which is sodden and slippery with the heavy damp for many yards around. The place is peculiarly unattractive, but at the same time very wet, and near it must have been a constant camping ground. It cannot, however, have had any large or settled population, since the possible plough land is limited to the wady bed, and is sufficient only for the needs of an inconsiderable village.

In passing from Muweilleh to Kossaima the great road to Syria is left to the north, and a smaller track, tending steadily uphill, leads in about an hour to this, the second spring of the northern plain. In Palmer's day Kossaima seems to have been a very barren spot,† but the Sinai Government, when establishing a police post here, dug out the spring, and cemented about it a basin with a long canal to take

* The name Muweilleh means a salty place. The description is a correct one.

† Photographs of Kossaima, before Bramley, are to be found in Musil's *Edom*, vol. ii, pp. 183, 185

the overflow (a stream as big as Ain Kadeis) to a drinking trough and reservoir. Below the reservoir the soldiers have made a garden in which are palm trees and fruits. The plain for a very wide space about the water-head is covered with great beds of rushes, and white with salt. The government post consists of two or three stone-built houses on little limestone hummocks above the spring. Beyond them on the north are some early graves, discussed in Chapter II with the other graves we found.

III.

Ain el Guderat.

From Kossaima the path to Ain el Guderat leads at first over a plain of flat soil dotted with small bushes as far as the mouth of Wady el Ain, and then up this great wady for about a mile to the sharp turn on the left which leads into the tributary valley of Wady Ain el Guderat, called also locally Wady el Ain for saving of breath. The flat soil of the Kossaima plain is sand in summer, and very treacherous mud after rain. The Arabs plough some part of it each autumn, and when the rain is plentiful their crops are splendid, but if there is no rain they lose their labour for that year. The extent of clear soil hereabout makes this one of the most important plough-lands of the neighbourhood. It is now not fully cultivated, since the needs of its present scanty population are satisfied with a little part; but there is room enough for the work of many men. Wady el Ain the greater is rather stony, but with here and there patches of clear ground, reputed better than the plain outside for the amount of moisture always present in the soil. Nearly every winter this wady runs down in a little flood, and very often in its upper course one can find water in the water-holes (*themail*).

The smaller valley, Wady Ain el Guderat, opens unpromisingly from Wady el Ain on the east. The usual road cuts across low banks of limestone dust and chippings, like giant rubbish heaps, which extend from the north side of the tributary valley to beyond its middle. After them comes the rough mouth of the water-course, and beyond again, going southward, hummocky ground of crumbled limestone. This *débris* of floods in the entrance explains how travellers looking for Ain el Guderat have gone up and down the main Wady

el Ain without seeing any traces of it. It is quite a narrow valley, edged by hill slopes so precipitous and lofty that it may well be called a gorge. On the south the wall of these limestone steeps is for a great way unbroken, falling at times in a sheer drop of a hundred feet to the soft grass of the meadows beneath. On the north it is a little more open, in that there are two or three places where side valleys run in, and offer difficult ways to the Arabs when they want to pass out directly northward to Ras Seram and Syria. On the west, across the main Wady el Ain, the view is cut off abruptly by the knife edge of Jebel el Ain, with a stone heap on the crest of it. To the east is the heart of the hills (Plate XIV).. These cliff-boundaries shelter the valley from the sun of the morning and evening, and enclose it in an air of remoteness and quiet somewhat spoiled by the resonant echoes they throw back.

When first seen from the foothills of the mouth the lower part of the valley appears green or yellow with the crop according to the season, and has goodly acacia trees standing at intervals along its edge. The
 THE VALLEY. soil is many feet deep, and of very clean earth, a little light perhaps, but wonderfully good for Sinai. From the fading out of the cultivated land at the mouth to the source of the water may be two miles or so, and the width of the bottom varies from one hundred to four hundred yards. The watercourse in the middle is not, as in all other valleys of the hills, a sprawling moraine of loose boulders, but is a clear channel, cut five to fifteen feet into the ground, steep banked, and generally from three to ten yards in width. It thus wastes only an inconsiderable part of the valley space, and its depth gives it content enough to carry off all ordinary floods without damage to the fields on each side. An occasional great flood may sweep the whole place, levelling trees and washing out the soil, as happened two years ago; but normally the lower reaches of the torrent-bed are dry except when it is raining, or when the cultivators, having finished the watering of their land, turn the stream of their little canals back into the proper bed.

Each side of the valley is marked off sharply from the hill slopes by a line of large broom bushes, as great as trees, which push their roots into the abandoned ditches of two old irrigation channels. That on the
 THE south side is only a dug ditch, winding along the contour of the
 AQUEDUCTS. hills, till it comes to an end in a great Byzantine reservoir, situated in the very mouth of the valley, at the junction of its south side with the east side of Wady el Ain. The reservoir is a great work, four-

square, and about twenty yards each way, built in the usual style of the precise Greek masonry, laid in line, and it still preserves in one corner the opening of the sluice, which let out its water as required to gardens on the flat land round the elbow of the hills. The reservoir is, however, now long abandoned, half filled with earth and stones, and its conduit is only useful to the *rethem* trees.* The northern aqueduct is carried up higher, and is built of masonry and very poor mortar; it is nearly all destroyed, and, therefore, very difficult to trace. It may also have gone to Wady el Ain, but more probably it was made only to bring water to a little Byzantine village whose remains yet exist in a bay of the northern slope, near the beginning of the outer foothills. The present waterways are only ephemeral, a deeper furrow among the crops, as such canals must always be, made each spring and destroyed each winter in the Arab yearly interchange of plough and fallow.

The plough-land is broadest on the north side of the stream-bed, and on this side also are the threshing floor and corn pits of the Guderat tribe, in front of the ruins of the Byzantine village mentioned above.

THE TELL. Behind them, up a valley, the main road goes out to Ras Seram; east of them the valley draws in suddenly; and in the very throat of it lies a small *tell*, or mound of ruins, blocking up the road (Plate XIII). Against one side of this mound grows a spreading acacia tree; under the other runs the torrent, and round about are heaps of small building stones and pottery and ashes. Round the bend the valley opens out into a splendid field, with some large trees along the stream, and beyond this again are more fields, up to the dam across the water, in which the irrigation ditches have their start. The Arabs do not care to cultivate above this point, and so the winding valley floor is filled by a dense thicket of reeds, in the midst of which the stream, now in long pools eight feet deep, edged with flags and

THE SPRING. bulrushes, moves more slowly. The spring proper† is yet half a mile higher, where a buttress of limestone runs into the valley (Plate XV). From the foot of it the water gushes out strongly in three little spouts thick as a man's arm, from deep, narrow fissures in the rock. The

* It is perhaps worth noting that Trumbull (*Kadesh-Barnea*, p. 280) suggests that Moses may have mistaken this Christian reservoir for Hazar-Addar of Numbers xxxiv, 4.

† Ain el Guderat means the spring of the earthenware kettles, or small spouted pots. Whether it refers to the rush of water, in contrast to the slow welling up of Ain Kadeis, or to actual pottery, we know not. The French fathers (*Revue Biblique*, July, 1906) call it Ain el Mufjer. The spring is sometimes called el Mufjer locally, to distinguish its force: but this is not a proper name.

noise of the falling water, the Arabs say, is so great that a man cannot hear himself speak ; perhaps, for the water's sake, they use a gentler utterance than their wont. The plain of reeds goes far above the spring, and the land is still moist. Indeed, five minutes' walk higher up is a built aqueduct of stone and lime leading out of the hill-side and running across the valley. It probably points to another, but now forgotten, spring which watered these upper fields.

IV.

The Antiquities of the Kossaima District.

In the valley of Ain el Guderat are remains of many periods of occupation. The latest are the Arab graves of the Guderat tribe on the top of the little tell, and the excavated Arab corn-pits at the foot of the Ras Seram road. There are other Mohammedan graves—old ones
 ARAB REMAINS AT AIN EL GUDERAT. —below the great Byzantine reservoir in the valley-mouth, which are set in a medley of walls running about the platform below the reservoir. There may have been buildings here, but more probably they are only conduits and retaining walls of terraces in an irrigation scheme ; it would be a very good site for water-gardens, and probably on the abandonment of these the Arab conquerors took the ground as a suitable graveyard. The tombs are only rings and ovals of stones very roughly arranged ; on some stones were varieties of tribe-marks, and there was one little stone of the flat disk type, common in Byzantine cemeteries, with a rude cross scratched on it. Facing this cemetery, across the valley, is a large underground corn-store of the ordinary bell shape, but lined with rubble masonry all the way up.

Of Byzantine remains the reservoir already described is by far the largest and most important ; it and the conduits on each side of the valley prove that in the
 BYZANTINE REMAINS AT AIN EL GUDERAT. Byzantine time not only was the whole of the valley-bed proper in cultivation, but work was extended beyond, over what is now the waste land of Wady el Ain. The Greek population must therefore have been more numerous than the present owners of the valley, or have been assured of a larger market for their produce. One can well imagine that in years of drought Ain el Guderat fed all the saints of Central Sinai.

The Byzantine village on the north side of the valley, at the spot where

the road to Ras Seram runs into it, is a collection of very simple huts. The remains now visible are those of from fifteen to twenty poor small houses, built in unshaped rubble. The plans of them are not very apparent, for the Guderat tribesmen have dug out their corn-pits among them, and, as their threshing floor is just below, they usually, for a few weeks in each year, move their camp to the old village site, and pile up its stones in a fresh arrangement every time along the back and side curtains of their tents. None the less, the foundations are certainly Byzantine, for the ground all about is red with the hard ribbed pottery of Gaza make, peculiar to Christian ruins everywhere in this part of Sinai. There is no permanent settlement of Arabs in the valley, through their fear of the climate. It is believed that anyone who lies there in summer (whether man or beast) will be attacked by an intermittent fever of peculiar strength ; indeed, even the cooked meat of animals which have fed in the valley is declared dangerous by the local authorities in hygiene. As a matter of fact, the large deep pools of the upper river must be admirable breeding-places for mosquitoes. Starting above this Byzantine village, and running eastward along the hill-top, there is one of the long and puzzling walls which, like those elsewhere in the Negeb, appear to start and go on and end so aimlessly. It is a wall of dry stone, perhaps three-quarters of a mile long in all, and still perfectly preserved. It has been piled up very carelessly, from two to three feet thick, and from three to five feet high. It runs reasonably directly along the hill, never at the crest, but always a little way down the valley slope ; it crosses gullies on the hill-side, without varying its height or taking any regard of them ; in one place it is broken by plain openings, flanked internally by a square enclosure, a few feet each way, like a pound, or a temporary shelter. Its purpose is mysterious. Being on the downward slope of the hill it would not keep anyone out, and, besides, it runs only from one side-wady to another, and so would not really protect anything. It cannot be meant to keep human beings enclosed, for any child that could crawl would overpass it ; nor would it pen any sheep or goat. The only Arab animal that would find such an erection impassable would be a camel, and, perhaps, the wall is the monument of some tribe's exasperation in herding camels. The beasts have a perverse habit of wandering up a steep hill-side and becoming incurably lost, and this wall, if supported by fences across the valley at its two ends, would prevent their escape entirely. The present Guderat tribe disclaim all responsibility for the work ; but they are comparatively new-comers in the district.

When walking across the valley of Ain el Guderat between the Byzantine reservoir and the village site, we picked up near the torrent bed some pieces of *terra sigillata*, the hæmatite-stained polished pottery of Roman period. The only fragment of recognizable shape seemed to be that of a cup of a very late type. There was also, however, a piece of one of the shallow round-bottomed cups or little bowls of hæmatitic ware, with classical ornament moulded in relief on the outside, which occur plentifully in North Syria in deposits of the 2nd and 1st centuries B.C. These pottery fragments had almost certainly been brought by water to their present position, and we could find no traces of the site of the Hellenistic settlement from which they probably came.

However, all the rest of Northern Sinai can show ruins and remains as good as these. The great interest of Guderat is in its tell,* which seems to contain a ruin of a period not represented elsewhere in the Negeb, save in the hut ruins of Muweilleh, the graves at Kossaima, and, perhaps, in the little guard-houses at Bir Birein and Raheiba on the great road between Hebron and Egypt. Tell Ain el Guderat is by far the most important of these, since its walls stand ten feet high, its ground plan is intelligible, and its pottery bears witness to greater wealth and refinement than we suspected in the other places.

The tell is a little mound about 200 feet long and 120 feet broad, fairly regular in shape, and stands now in a heap from twelve to fifteen feet high above the corn-fields. The sides are very steep, and at first the whole thing looks only like a pile of round water-worn pebbles and ashes, without system. This, however, is seen not to be so as soon as one digs anywhere. The water-worn stones then appear as the filling of walls faced, not certainly with ashlar, but with limestone blocks selected off the hill-sides with regard to their squareness of shape and convenience of size for loading on a camel and for laying (Fig. 8). The design of the building was a long rectangle, with square towers of slight sally at the four corners, and a small tower in the middle of each face. The walls were built hugely thick to a height of ten feet above the ground, when their solidity seems to have ceased, and they became mere shells of built stone, with a series of rooms or corridors in their thicknesses. The walls are faced with well-laid blocks, some as much as three feet long, but all thin and light; the filling is

ROMAN
REMAINS AT
AIN EL
GUDERAT.

TELL EL AIN
EL GUDERAT.

* First recorded by Dr. Kuhlreiber, in *Z.D.P.V.*, vol. 37, part i.

of river pebbles, large rough stones, and mud. Between the towers the wall seems to have been sloped out in a talus, which near its base lines up with the

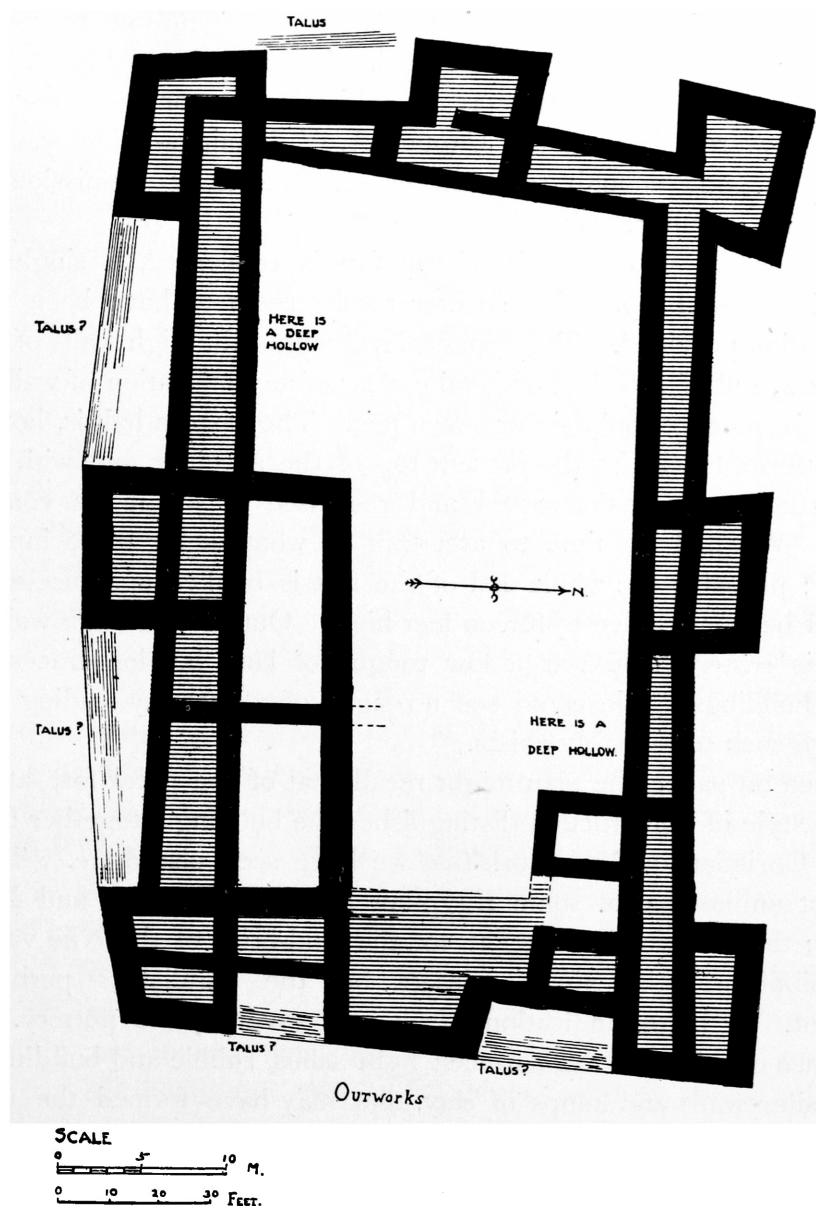


FIG. 8.—FORTRESS AT AIN EL GUDERAT.

outer faces of the towers; from that point it was carried down vertically for perhaps two or three courses to the ground. In our view the plan of the building is superior to its execution.

We dug into one of the rooms on the top of the wall and found that its sides were standing a yard or more high, and from this, and from a good deal of surface-scratching while following walls, we have ventured to reconstruct tentatively the whole building as described. It demands, of course, far more thorough investigation than we gave it, with our two or three men, in the three days we were able to spare. Captain A. W. Jennings-Bramley, Governor of Sinai, was good enough to grant us an emergency permission for the *sondages* which we undertook.

So far as the western half of the fort is concerned, a single row of chambers in the wall top, and the tower rooms, seem to have been the only accommodation provided. The ground level within the high walls of this half was very low, full of soft dust and quite clear of any indication of walls. The depth of it is, perhaps, only six or seven feet. The eastern half is, however, a sort of platform, level with the present top of the enceinte, and with obvious signs of party walls that crossed and recrossed it, making a complex of chambers. We had no time to ascertain to what depth these inner walls descended; probably the whole end of the fort is banked up, since otherwise they would be from twelve to fifteen feet high. Outside the main wall of the fort on this eastern side was a low tongue of land bearing traces of less important buildings. We could see no signs of a gateway leading into the fort, though such presumably exists.

As seen on paper, the plan might recall that of the great fort at Abda; actually its style of construction distinguishes the building altogether from any Byzantine-Christian or Arab work that we have seen elsewhere. The plan again is not unlike that of some Egyptian forts of the XIIth and XVIIIth Dynasties; the material is different, for the mud-brick of the Nile valley was an impossibility in the Sinaitic desert, but the parallel is perhaps not insignificant. A better indication of date is given by the pottery. There was not much of this upon the surface; light ashes, rubble and building-stones from the fallen walls and lumps of clay, that may have formed the roof, had buried everything; but in the little room which we cleared and in the debris of the sides of the mound we found any quantity of broken sherds. There were both wheel-made and hand-made wares, but the Egyptian types for which we first hoped failed us altogether: the pottery was purely Syrian. Many large vessels were of a greenish grey clay, turned on the wheel, not unlike the "gulla" wares of the Nile, but not to be identified as such. One piece of a cup or tumbler in strongly ribbed reddish clay, which might by

Egyptian analogy be late, has parallels in Syria that date back to the tenth or twelfth centuries B.C. There were fairly numerous sherds of the line-burnished hæmatitic ware (hand-made) which occurred also in the guard-houses of the Darb el Shur and have been, in South Palestine, assigned by Macalister to the Second Semitic period (perhaps rather they belong to the whole period 1800–900 B.C.).

Some fragments of fine painted pottery, at first sight closely resembling some Cypriote fabrics, might belong (also on the analogy of South Palestinian sites) to the end of the second millennium B.C. Together with these, there were fragments of rough hand-made wares, thin-walled, of gritty clāy burnt very hard in an open hearth, which are identical with those found in the graves at the mouth of Wady el Ain el Guderat, in the ring-graves of Kossaima, and in the hut dwellings by the Muweilleh springs.

The evidence furnished by our brief scratching of the soil is not enough to fix the date of the building with any accuracy. It enables us, however, to say that we have here in the neck of the wady, commanding the finest water-supply in all the desert, a building which from the thickness of its walls may well have been a fort, of Syrian or Semitic, not of Egyptian origin. It is connected in culture and probably in date with the early hut-settlements and graves that cluster round the other water-sources of the district. It was occupied for a comparatively brief period, in the latter part of the second or the beginning of the first millennium before our era. Various tempting theories lie obvious to hand, but only thorough excavation can profitably solve the character of what is beyond question an interesting and important site.

In the valley of Ain el Guderat we found a worked flint. It may of course have been a prehistoric one, and, if so, the place would be distinguished as the only Stone Age site we noted in our part of Sinai: but more probably it is of Arab manufacture and comparatively modern. The tribesman is a great maker of flints, and Ain el Guderat, with its flocks and herds, is a place where they must use many flints each year. Another unpromising object is a cave in the south wall of the valley: it is a very simple hole, hewn in the cliff-face about three hundred yards above the tell. Its mouth lies about a hundred feet above the ground, and is reached by an easy path. The cliff is of very soft stone, and so the roof has scaled in large masses which bury the floor deep in chalk and dust. The opening of the cave is very nearly its greatest width: it seems once to have had side chambers like

FLINTS AT AIN
EL GUDERAT.

a Byzantine tomb, but there is no evidence at all of early date. The Arabs say that it was dug to extract salt from the rock.

The early graves of the Guderat valley are treated by themselves in Chapter II, p. 24. Historically the point of importance in connection with

GUDERAT
GRAVES.

them is that their pottery is that of the tell (except for the lack of painted ware) and that of the Kossaima graves combined.

KOSSAIMA
GRAVES.

They thus provide a useful link between the various remains of the Kossaima district. The graves at Kossaima also are described in full in the chapter dealing with burials (Chapter II,

p. 23), and from them one may presume a small rude settlement in Kossaima also at the Guderat period. We were not successful in finding any house ruins there : they may have been destroyed, or we may have missed them ; but the point is unimportant as we found plenty of dwelling-houses and

MUWELLEH
RUINS.

a few graves of exactly the same type at Muweilleh. The ruins

there, close to the water-pools and the small cave described by

Palmer, appear to be those of a little village containing perhaps

thirty "houses" of a temporary character. The houses are very small, some rectangular, some circular or semicircular. They are now represented by very low heaps of large pebbles, so few in number that they must nearly all have been like the hut of our guide from Ras Seram. His house, which he had furnished with a coffee-pot (for making shrub-coffee) and a water-skin, was a crescent of piled-up stones, three or four courses high, caulked with tamarisk leaves, and topped with tamarisk boughs to keep off the wind. He had rested a few branches horizontally across the wall, anchoring them with stones, to provide himself with the luxury of a roof : if he was cold he lit a fire between the horns of the crescent. The only huts at Muweilleh not like this were two or three more magnificent rectangular ones, belonging to those fortunate owners who had a tent-cloth to roof them in. The pottery about the settlement was almost entirely the roughest hand-made type of the district. There were only two or three sherds of the finer wheel-made wares.

The castle of Ain el Guderat is so enormously better than the remains about it that one is inclined to ascribe its erection to some outside agency. It is as much above the huts of Muweilleh as the police station of Kossaima is above the hut of our guide from Ras Seram. On the other hand, of course, there is no land and no water at Muweilleh that would justify a large village. The Rev. Caleb Hauser, in the *P.E.F. Quarterly* of April, 1908, does not agree with us here. He identifies this Muweilleh with the biblical Makkelath,

and the Latin Mohaila, the military station in the *Notitia*. In Christian times, he says, it must have been the seat of an archbishopric, since Palmer found there traces of Christian occupation. His first point is etymology, in which we are incompetent; in regard to his second there are no material classical remains to make probable a Roman post. As for the Christian remains, Palmer, whom he quotes, in describing them, is carefully exact upon the two insignificant and widely separated holes in the chalk which still exist, each with a little cross in red painted on the wall.* All Sinai, Palestine, and Syria are littered with similar remains. And there is no reason why these particular caves should have ever contained an archbishop. There was probably another Muweilleh below Aila on the road to Sinai. It is, unfortunately, a very common Arab place-name.

V.

Kadesh-Barnea.

It would perhaps be improper to close this chapter without any reference to the vexed question of Kadesh-Barnea. The unfortunate vagueness of the Pentateuch geographically, and its lack of synthesis historically, cause the end of all such controversies to be a deeper confusion than the beginning: therefore, so far as possible, we have kept out of our pages any reference to the barren literature of to-day which wrangles over indeterminable Bible sites. In most cases the strife is about a Hebrew name, and its possible reappearance in a modern Arab form. That glib catchword "The unchanging East" has blinded writers to the continual ebb and flow of the inhabitants of the desert. It is hopeless to look for an Arab tribe which has held its present *dira* for more than a very few generations: and to expect continuity of name, as in settled districts in Syria, is vanity. A second factor to be remembered is that the Jews were an unscientific people, anxious only to get through the inhospitable desert as soon as might be. Research into local nomenclature is to-day very difficult among the tribesmen; and it is not likely that Moses was more patient and painstaking than a modern surveyor. Probably, as often as not, the Israelites named for themselves their own camps, or unconsciously confounded a native name in their carelessness.

* Père Jaussen, in the *Revue Biblique* for July, 1906, has drawn plans of these caves.

At the same time, by good or ill fortune, the problem of Kadesh-Barnea is a little narrower and a little more documented than most. We are told that the Jews left Ezion-Geber, and went to the Wilderness of Zin, which is Kadesh ; and that the latter touched on the boundaries of Edom. We know where Ezion-Geber was, more or less, and where Edom was ; though there is not the faintest light upon her boundaries. Somewhere between these points the children of Israel seem to have spent nearly forty years. We have no safe clue as to the numbers of the tribes, nor do we know their social condition ; and this capital ignorance qualifies all discussion as to how they were disposed. There must, however, have been at least some thousands of them. They may have been genuine nomads, scattering to all the corners of the desert in groups of two or three tents, in which case Moses was an even better organizer than we knew, to gather his people again and launch them against Palestine as a disciplined army ; or they may have been a tribal group keeping to one district and moving a mile or two in this direction or in that as they devoured the pasture. If this second view be accepted, then it is definitely our opinion that only in the Kossaima district are to be found enough water and green stuffs to maintain so large a tribe for so long, and that therefore the Wilderness of Zin and Kadesh-Barnea must be the country of Ain el Guderat, Kossaima, Muweilleh, and Ain Kadeis. The similarity between the names Kadeis and Kadesh need not be a mere coincidence, for the former is just as likely to be of ancient as of recent origin. The extension by the Israelites of what is now the name of a small isolated valley to a whole district can be explained by the fact that travellers coming from Akaba would happen first on the low country at that valley's mouth, a country less detestable than the wastes they had just left, and might easily, as strangers, call the whole plain after their first watering-place. On the other hand, the assumption, necessary to our minds, that the place-name was extended to a district embracing other and better water-sources, undermines the identification of Ain Kadeis valley as the scene of events related as happening at Kadesh. These may have taken place anywhere in the Kossaima neighbourhood. We are told that at one well in Kadesh the Israelites found the water insufficient—and if there were more than twenty families of them, and the spring were the present Ain Kadeis, then their complaints must be considered moderate. Thereupon Moses produced the water of Meribah, so called to distinguish it from the first well. Certainly it is useless to look for this copious fount in the barren gorge of Ain Kadeis, unless we suppose that it dried up as miraculously as it appeared. At

a later date Moses, writing to the King of Edom, described Kadesh as "a city in the uttermost of thy border" (Numbers xx, 16). The word "city" is a vague one, and probably only means a settlement, perhaps a district, like the modern Arabic "beled" which is used to mean town, village, district, or country. In the former sense it might be used of such hut-settlements as those of Muweilleh and Kossaima; but would most temptingly apply to the fortress of Ain Guderat, should we assume—we cannot prove it—that the fort was already built when Moses came.

Strategically the Kossaima district agrees well with what we know of Kadesh-Barnea. The Darb el Shur, the road of their forefathers, stretching westwards before the eyes of the mutinous Israelites, suggested an easy return to Egypt (Numbers xiv, 4); the same road runs northwards to Hebron, whither the spies went up to view the Land of Promise (Numbers xiii, 21). From the south runs up the main road from Elath, one of the stations on the Exodus route. Westwards there is a choice of roads; one can go either through Bir Hafir and the Abda district by what is now called the Darb el Sultan, the King's Highway, into the Araba, or by way of Wady Lussan, a little to the south, to Bir Mayein,* and thence by the Jerafi wady system to sundry roads* leading into the Araba directly in front of Jebel Harun, the traditional Mount Hor. To choose to-day out of the innumerable hills of the country one particular peak to be the scene of Aaron's burial shows, perhaps, an uncatholic mind; but as long as the tradition of Jebel Harun passes muster, so long the existence of recognized roadways between the mountain and the Kossaima plain must influence our judgment. These roads running out to north, south, east and west—all directions in which journeys were planned or made from Kadesh-Barnea—together with its abundance of water and wide stretch of tolerable soil, distinguish the Kossaima plain from any other district in the Southern Desert, and may well mark it out as the headquarters of the Israelites during their forty years of discipline.

* Very carefully examined by Père Jaussen in the *Revue Biblique*, July, 1906, with a sketch map, and a good description of the way.

CHAPTER V.

THE BYZANTINE TOWNS.

They have their day and cease to be.

Esbeita : Zephath and Hormah : Mishrafa : Abda : Beersheba : Khalasa : Saadi : Raheiba :
El Auja : Kurnub : Akaba : Geziret Faraun.

ESBEITA lies on the east side of the great Wady Migrih, just opposite the mouth of the Wady el Abiad. Its eastern bank is a long slope of flint-covered limestone, half-way up which are the ruins of the town ; south of the ruins it is broken by the little Wady es Zeyatin. The only road visible in the neighbourhood passes under Mishrafa and runs south, keeping close to the west bank of the Wady Migrih ; Esbeita therefore lies well off its track (Plate XVI, 2).

Wady Migrih is the last place in which one would expect to find a town. It is not on the line of the desert trade routes, and it is peculiarly barren. On the east great stony slopes, and on the west limestone cliffs, shut in a wide valley where stretches of drift-sand divide rolling banks of flint-strewn rock. The ravines high up the hill-sides have been terraced into tiny soil-plots, but even Byzantine industry could do little with the main valley. Under Mishrafa there are a few patches of old tilth, but for the most part the grey-green scrub alone refuses to admit the impossibility of life amongst the stones, while the flint-heaps on the foothills show where vines gave up the struggle long ago. Wady Zeyatin, as its name shows, may once have been an olive-yard, and three or four stunted olives still survive there ; but it is a narrow little valley without much room for trees. The only arable land from which Esbeita could have drawn its food supply lies two miles and more away from the town in the Wady el Abiad. Here, in spite of the sandy character of the soil, through which the *seyl* waters have cut deep channels with precipitous crumbling banks, much of the broad valley bottom could be made moderately fertile in good seasons. It shows everywhere traces of old cultivation (Plate XXII, 2) ; the lower foothills are marked out with rows of

vine-heaps, the flat land is still in furrows, and in the middle of the wady is a small ruined hamlet with vine-towers and walled gardens. It seems strange that the town should not have been placed here rather than on its sterile hill-side so far away. One can only suppose that the monks, who presumably first settled there, chose with intent a spot whose barrenness, equal to that of the Thebaid, might exercise them in good works, and that the lay folk, later comers, chose to build their houses under the protection of the monasteries, though forced to go to a distance for their food.

There were no living wells at Esbeita. Water could be fetched from some *harabas*, rock-cut cisterns, about a mile and a half away to the north-west, in Wady Migrih, or from Wady Themail, further to the south; but the people generally depended for their supply upon the great reservoirs in the middle of the town and upon the countless cisterns with which the rock is honeycombed (Plate XVII, 1, 2). There was one cistern at least in every town, and the streets and open places served as so many more; everywhere were runnels and long banks of earth and stone to catch the rainwater and to carry it to the tanks; even outside the town one such banked conduit followed the wall-line and led to cisterns and to the few poor garden plots that lie on the lower western slope.

These Byzantine cities of the south have so strong a family resemblance one to another that it would be tedious to describe them all in detail with vain repetitions; and since Esbeita is the best preserved of them it may well serve as a model for the rest (Fig. 9). Esbeita is small, measuring some 450 metres by 350 metres, and of irregular shape, an aggregation of haphazard buildings rather than a town laid out on a plan. Properly speaking it is not walled, but the walls of private houses and of their gardens along its outskirts are continuous, and form a complete girdle, broken only by small arched gateways at the ends of some of the streets. So flimsy a bulwark was useless, as events proved, against a properly sustained attack; but a blank dry-stone wall can stop a Beduin raid, and was considered sufficient not only for a monastery town like Esbeita but even for the fortresses of Abda and Kurnub.*

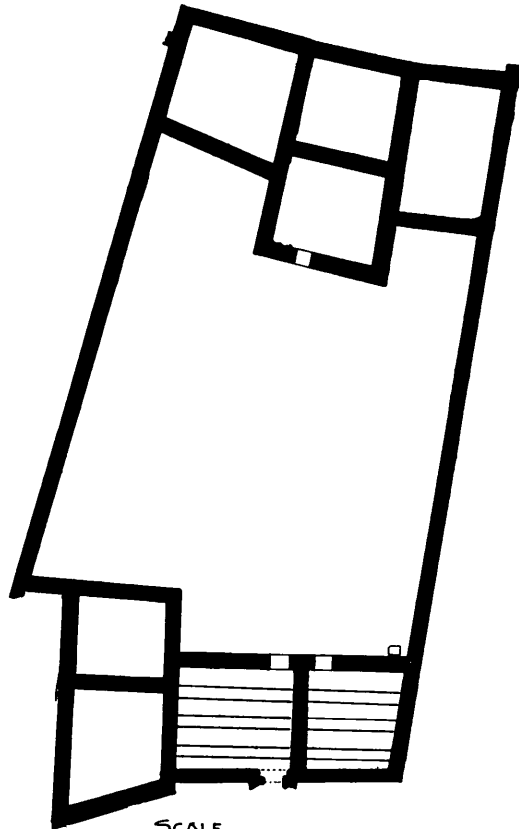
In the centre of the southern part of the town is a great double reservoir of irregular shape open to the air, with sides of masonry and

* Palmer, in *P.E.F. Quarterly* for 1871, p. 33, published a good sketch plan which we only saw after our own was complete. The new plan adds but little to the old, and is published here merely to illustrate the text.

of rubble concrete ; each of the two basins has steps leading down into it. The northern streets drained into the reservoir. From the reservoirs the main roads of the town run out in all directions. They are of varying widths (though four metres is about the average) and full of turns and angles, following the outline of houses built at hazard. To the north the ground slopes gently upwards, but it falls away sharply to the south-east ; the south-west road from the reservoirs ran down an old wady bed and was broken by steps, and the narrower lanes also that joined it from the west ended in flights of steps upon the main street. Such is the state of the ruins that it was not always easy to determine even the principal roads ; from them short blind alleys branch off frequently to give approach to the centre of the larger *insulae*, but these alleys were more often than not so encumbered with debris that they could not be distinguished from the courtyards or even from the rooms of the houses about them.

There are three churches in the town, one at the extreme north end, one a little way to the south, and another fronting on the reservoirs ; all are of the stereotyped Byzantine plan of which we shall see many examples in other towns. Attached to each of them is a large building, presumably of a monastic character, and the three together comprise a not inconsiderable part of the builded area within the town. The churches will be described in detail later.

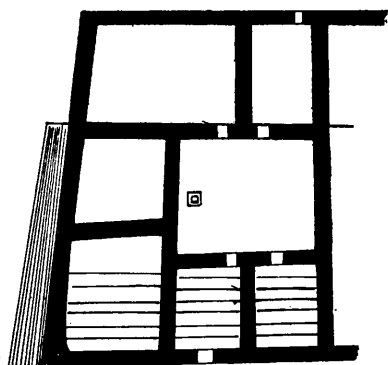
The private houses, though differing a good deal amongst themselves (Plate XX, 1), are all modifications of the "courtyard" type prevalent in the country throughout this period, and faithfully reproduced by the modern



SCALE
0 5 10 M
0 10 20 30 FEET.

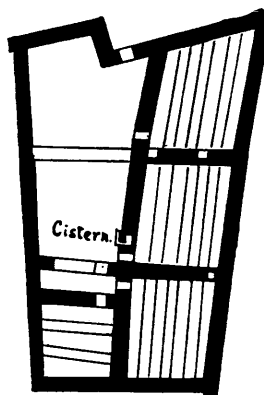
FIG. 10.—HOUSE IV.

dwellings, *e.g.*, of Beersheba. The main feature is an open courtyard, generally entered through a vaulted chamber, but sometimes giving directly on the street, on which front the living-rooms ; these sometimes run round three sides of the square, more often they lie at its two ends. In the normal house the main block is composed of three chambers in a row, of which the central one, a vaulted *liwan*, opens with its full width on the courtyard and gives access to the rooms on either side. Naturally the plan varies with the shape of the building plot and with the size of the house ; thus the building marked IV on the plan (Fig. 10)—so large and solidly constructed that it may well be government offices rather than a private house—is a good example of the norm. By a door with well-moulded jambs the entrance is through a vaulted room, flanked



[For scale see Fig. 10.]

FIG. 11.—HOUSE V.



[For scale see Fig. 10.]

FIG. 12.—HOUSE VI.

by two other chambers, into a very large courtyard, at the far end of which are the open *liwan* and the living quarters. In the building V the rooms run round three sides of the courtyard, the entrance being through one of the southern chambers (Fig. 11). In VI, a small irregular house (Fig. 12), the doorway leads straight from the street to the courtyard ; the *liwan* and the two side chambers lie on the left, and the far corner of the court is taken up by another small room. Many of the houses were quite large, with wide courtyards and even gardens that took up much of the available area of the town and made it far less populous in reality than its dimensions would seem to show. Immediately south-east of the reservoirs the houses were small and crowded, many being but booths open to the street, and of one storey only, but the better-class houses were seldom cramped. These latter were generally of two

storeys ; the high walls that lined the streets were blank, since windows faced inwards on the courts, and there was no attempt at external decoration. The sky-line, broken by the lofty naves and campaniles of the churches, may have been picturesque, but the narrow streets must have been, save for the bazaars, as dull and unsavoury as those in the native quarters of any modern Syrian town.

A peculiar feature of these Byzantine buildings is clearly brought out in the photograph on Plate XX, 2. The lower storey is built of blocks of hard yellowish limestone roughly split in the quarry ; the upper storeys are of smoothly-trimmed chalk that turns honey-coloured with exposure. There is a constructional reason for this. The hard stone is preferable when it is merely a question of bearing top weight ; the chalk is soft for such a purpose and was therefore never used in the lower parts of walls except on an interior face when, as in the apse of a church, the form of the building demanded that the stonework should be truly laid. The masons were unable to cut the hard limestone to a good surface, and therefore for an arch or vault requiring shaped voussoirs they had to content themselves with chalk ; and since the ease with which this could be cut would make it cheaper, and it is a lighter stone, it was invariably employed for upper storeys.

The scarcity of wood and the cost of importing it practically forbade its use in house-building. Everywhere stone was employed in its stead. Wall-cupboards were made with cut chalk slabs ; windows and narrow doors were flat-roofed with long blocks of hard limestone, and broader apertures were arched. The floors of upper storeys were also of stone (Plate XXII, 1). Broad rather flat arches spanned the rooms at intervals of about a metre, their springers resting on large blocks of limestone that stood out from the wall-face as corbels or were carried down to form pilasters. The spandrels of these arches were levelled up with rubble walling, and across, from one to the other, were laid limestone slabs, above which a packing of small stones and mud or lime formed the floor proper. The photographs of a room in house V on Plate XXI show this method of construction ; some of the cover slabs had fallen, but others can be seen resting upon the rafter-arches. Doubtless many of the roofs were flat and constructed in the same way, but there may also have been vaults of small rubble and lime built over a centring, as in the bath-house at Raheiba and, probably, in the naves of the churches.

The groins or arches that supported the ceilings of adjacent rooms were set in line with one another to counterbalance their outward thrust, and the

outer walls, if not supported by cross-walls beyond, were often buttressed with a stone talus. The danger of the collapse of what was practically dry-stone walling under the pressure of an arch was quite realized by the builders ; the talus-buttress was very commonly employed, and sometimes added to a wall already built and perhaps showing signs of weakness. The great apses of the churches, in spite of their height, required less support because of their better masonry ; the sides were sometimes buttressed, but only up to the clerestory. The backward thrust of the apse is, however, counteracted by a heavy talus, which was either solid, or else a hollow complex of chalk arches and retaining-walls set at various angles and sheathed in a skin of sloping limestone masonry.

Most of the building is with mud mortar ; lime is also used, but it is generally of a very poor quality, little more than powdered chalk and water. In the reservoirs the rubble walls are grouted with an excellent hard lime ; the same is occasionally seen as the pointing of wall-faces whose interior is but mud-grouted, and a very thin but good lime is employed in the chalk masonry of the church apses. But for the most part the lime was unburnt, and, like the mud from which it can hardly be distinguished, it has been washed out from between the stones, with the result that the walls now appear to be dry-built.

The bonding of blocks in a wall-face was carefully observed, but walls are poorly bonded together and more often merely butted on, even when of the same period and plan ; occasionally at the corners of buildings, however, L-shaped stones were employed to give greater strength and coherence to the angle. Walls were generally formed of two skins of facing-blocks with a filling of mud and rubble : virtually there was never any attempt at through-bonding, and so two dangers were incurred—the falling away of either face and the bulging of the wall through the weight of its filling. Probably to this defect is due the builder's fondness for double walls. A skin of fresh masonry was often applied to an existing wall when this had not to meet any outward thrust ; its own faulty construction demanded this makeshift.

On the hardest limestone, which is semi-crystalline and full of fossils, only the roughest hammer-dressing was employed, the blocks remaining for the most part only approximately square as they were split in the quarry. On an intermediate quality of stone, which is fairly hard but more uniform in grain, most of the dressing is done with the hammer, but occasionally on the outer face of the block there was used a toothed drawing tool which leaves

long, close striations. The chalk stones are shaped with a fine-toothed drawing-tool and with the flat adze: the voussoirs are cut remarkably true and the jointing is excellent.

Such decorative work, as there was, was executed always in soft stone, but at Esbeita the buildings were even more simple than was the rule in other towns. Capitals of pilasters were generally plain voussoir-shaped or at most had a band of simple indented pattern shallowly engraved; arches were occasionally picked out with a similar pattern or a band. The shafts of columns were not infrequently treated with plain belts in relief. The door of the central monastery, of which a drawing was published by Palmer, had collapsed when we saw it, and its key-stone had disappeared. The south door of the northern monastery, which was almost entirely masked by a later talus-wall (*see* Plan, Fig. 14) had moulded jambs with grotesquely decorated capitals (Fig. 13); the doorway of the large building IV also had moulded jambs. There were found in the churches two or three examples of simple ornament (*illustrated* later, *see* pp. 84, 86, 87), but apart from these there could be seen no remains of decoration or of inscription. Even the cemetery produced no inscribed stelæ.

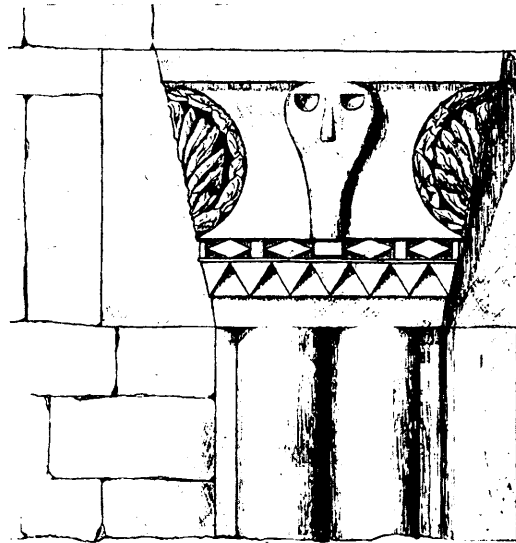


FIG. 13.—ESBEITA: NORTH CHURCH, CAPITAL OF SIDE DOOR. 1:8.

South of the town, just across the wady-bed, on a low flint-strewn bank of limestone, lay a small cemetery. The graves were shallow, sometimes stone-lined, rectangular in shape and covered with heaps or squares of stones; amongst these were some ashlar blocks and even fragments of columns, pointing to an occasional superstructure of a more ambitious type (*cf.* Khalasa, p. 111). There were no signs of carved or inscribed stonework. In the hillside close by were two large chamber-tombs, lying open and used for goat-shelters; probably there are others to be found both here and in the low limestone cliff-face that borders the wady a little distance below the town walls.

The agriculture of the district must have been carried on entirely by the

inhabitants of Esbeita itself, for with the exception of the few cottages in Wady Abiad there was here nothing to correspond with the hamlets and isolated farms that abound in the neighbourhood of Khalasa. The only buildings outside the town itself are two or three presses or vine-towers in Wady Zeyatin, and, about a hundred metres S.E. of the town, a single house of the usual courtyard type and a small building whose character we could not determine, though it may have been a bath. This building consists of a courtyard with two fair-sized rooms opening out of it. Along one side are a number of small compartments giving on to the courtyard, and similar compartments surround the smaller room on three sides. The walls of these compartments are of hard cement and rubble, and their floors also are of cement. Two similar buildings were found at Abda, one of them outside the town, and in the latter was a heavy stratum of ashes. The Esbeita example showed no signs of a furnace, but it was so ruinous that this fact is not conclusive. The place may be a bath-house with courtyard, dressing-room, and hot and cold baths in separate chambers. There was a large water-cistern just outside its main entrance.

The Churches.

The usual plan for the Byzantine churches in the south shows three aisles separated by arcades, and ending in round apses at the east end, the central aisle being considerably the largest of the three. The main body of the church is separated by a screen-wall pierced with three doorways in the ends of the three aisles from a courtyard often surrounded by chambers or cloisters, and containing a cistern; in one corner of this courtyard there is generally a square campanile. In two of the Esbeita churches this courtyard is reduced to a minimum, owing to the cramped area on which the churches are built; when the ground is more open, as in the case of the northern church, or of the churches at Raheiba and El Auja, it may be larger than the actual naves. Subsidiary chapels are sometimes added to the south side of the main building. The entrance to the church is always through the outer courtyard.

The apses are always built of chalk ashlar, and the apse itself is always laid out on a single centre, set back somewhat so as to make it a little more than a semicircle in plan.

The northern church is almost entirely surrounded by a heavy talus which did not form part of the original plan, but seems to have been added

when the first chapel was built against the south side of the main nave (Fig. 14). The rough stonework of the talus hid almost completely the ornamental jambs of the main entrance, which was in the middle of the south wall of the forecourt. One jamb of this doorway had disappeared, the other is shown in Fig. 13. Entering here one passed through a vaulted chamber into the great court. The chambers which once ran round three sides of it had been almost completely destroyed, only that in the north-west corner retaining its roof ribs intact; even the walls of the others could only with difficulty be distinguished in the mass of débris that was piled high within the court, and on the north side the outer wall itself had been breached, and the inner wall of the chambers is little more than conjectural. It could be seen, however, that there had been two tiers or storeys of vaulted rooms, each provided with a niche or cupboard in the wall, and all looking out upon the courtyard. Since the court was considerably wider than the original church proper, there was no symmetry between the two. The door in the screen-wall leading to the north aisle had to be approached through a small chamber, instead of opening as usual upon the court. A corresponding chamber in the south-west of the courtyard, having an arched doorway with indented ornament on its capitals, led through a second door into a small room which, from the great heaps of fallen masonry about it, seems to have been the ground floor of the campanile; it seemed probable also that a doorway in the south side of this tower-chamber afforded a private entrance to the adjoining monastery (Plate XVIII, 2). The screen-wall was of ashlar chalk masonry; it was pierced by three small arched doorways leading to the three main aisles. Unfortunately all traces of the arcades had disappeared: no fragments even of columns could be found inside the church, so we could not tell whether the arches rested, as is usually the case, on round column shafts, or upon masonry pillars. The apses were standing tolerably intact (Plate XVIII, 1); that in the centre had a height of eight metres; the side apses stood about three and a half metres high, and there were signs of chambers above them, also vaulted, whose vaults would have been level with the top of the main apse. These upper chambers, of course, served constructionally as buttresses of the central apse, but they seem also to have been actual chambers, and perhaps formed the east ends of the triforium. Since the north wall is standing (at the east end) as much as four and a half metres high, with no window apertures, and the south wall was entirely blinded by the chapel alongside of it, the lighting

of the church must have been by windows set very high up, in a clerestory : and perhaps in this church there was a triforium or gallery also, to include the upper chambers over the apses of the side aisles.

Each apse had a simple string-course distinguishing the opening of the dome from the vertical wall, and the central apse had a plain projecting string round the edge of its arch. The two side apses had each a small apsidal recess at the back. The masonry of the apses was pierced regularly above the string-course with long, narrow slits about a metre apart horizontally, and half a metre apart vertically, and below the string-course by horizontal rows, 1·40 from each other, of small square slots at intervals of twenty centimetres. At the centre of the east end the holes came closer together. In the centre of each side apse a large block had been cut away through the roof above the string course, and a smaller block on either side of it. These larger holes may possibly have held the beam ends of a canopy ; the smaller slots were probably meant to take the pins of a marble facing. Fragments of polished marble (including one with slightly concave surface and the marks of a bronze pin) were found on the floor, together with a piece of a small carved marble capital, and a glass *tessera* which showed that part of the building had once been decorated with mosaic.

The construction of the roof could not be determined by us. It had certainly not been vaulted in cut stone (like the baths at Abda) ; it may have been of wood ; the vast quantity of small chalk chippings and lime dust that covered the floor to a depth of a metre and a half rather suggested a light rubble-and-lime vault such as still stands in the bath building at Raheiba.

The south chapel was a later addition to the church. Its apse is built against the wall of the south aisle, merely abutting on it, whereas chalk ashlar is usually well bonded. The talus, which we have seen to be also later than the church, was put up to counteract a bulge in the original apse wall, whose stones were actually splitting and pushing outwards, and as it runs on to the back of the south chapel apse, it must be either contemporary with or later than that building also. At a still later period the new apse was found to be weak, and was therefore buttressed by a skin wall, 0·40 m. thick, which has now, in its turn, developed a pronounced bulge.

The nave of the chapel was cut short at the west end to form a small chamber communicating by an arched door with the south aisle of the main church, and giving access by a low door crowned with a flat arch of wide, thin slabs to a second chapel. The apse of this is of the same masonry, and

boasts the same string-course as is found in the original church, but the chapel is undoubtedly of considerably later date. The south wall, of the roughest rubble masonry, abuts on the late talus of the campanile, and runs at a very different angle from the other walls. In it there are three windows,

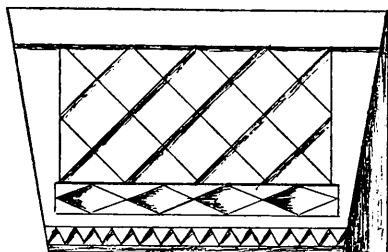


FIG. 15.—ESBEITA : CAPITAL IN LOGGIA—S. OF N. CHURCH (MONASTERY). 1 : 8.

three metres above ground, and seventy centimetres wide. The walls must have been mud-washed. On the apse are traces of paintings, and two holes cut in its dome above the string-course may have been for the supports of a canopy.

To the south of the church, and in connection with it, there extended a large building forming a complete *insula*. Probably it was a monastery. Unfortunately it was dreadfully ruined, and presented, therefore, few features of interest; little more than the ground plan could be made out, and some details even of the plan were

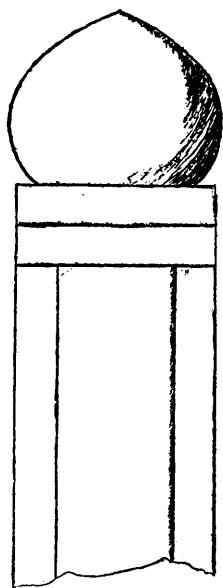


FIG. 16.—ESBEITA : HEAD OF POST—N. CHURCH (MONASTERY). 1 : 9.

to conjectural to be drawn. The building was divided into two main parts and an annexe. The eastern part consisted of a large court or garden, with a straight range of six cells opening on to it. The western part had a large, irregular courtyard surrounded on three sides by vaulted chambers. The door was in the south wall. A narrow vaulted passage in the north-west corner of the court leads through into a chamber from which, it would seem, a door under the campanile gave access to the church. An open space, lying behind this chamber, separated the monastery buildings from the wall of the south chapel. On the other side of the chamber, in the recess between the main or public door of the church and the north-west corner of the monastery, was an open *diwan* or loggia, having two arches that gave upon the church square. The arches rested on capitals, decorated with trellis pattern (Fig. 15), and two post heads (Fig. 16) found here may have formed part of a balustrade separating the loggia from the street.

One of the rooms on the west side was occupied by a large, open, stone-lined tank; in the adjoining small courtyard there was a cistern. The southern annexe consisted of five rooms opening into a small court, the whole laid

out on a different angle to the main block, and on a plan adapted to the lines of existing streets ; it was ill-built and is particularly ruinous.

The Central was the most ruined of the three Esbeita churches (Fig. 17). The narthex, which, thanks to the narrowness of the ground-area, was contracted to the width of a mere passage, was heaped so high with débris that but little of the screen-wall was visible, and the position of the three doorways could only be approximately planned. Inside

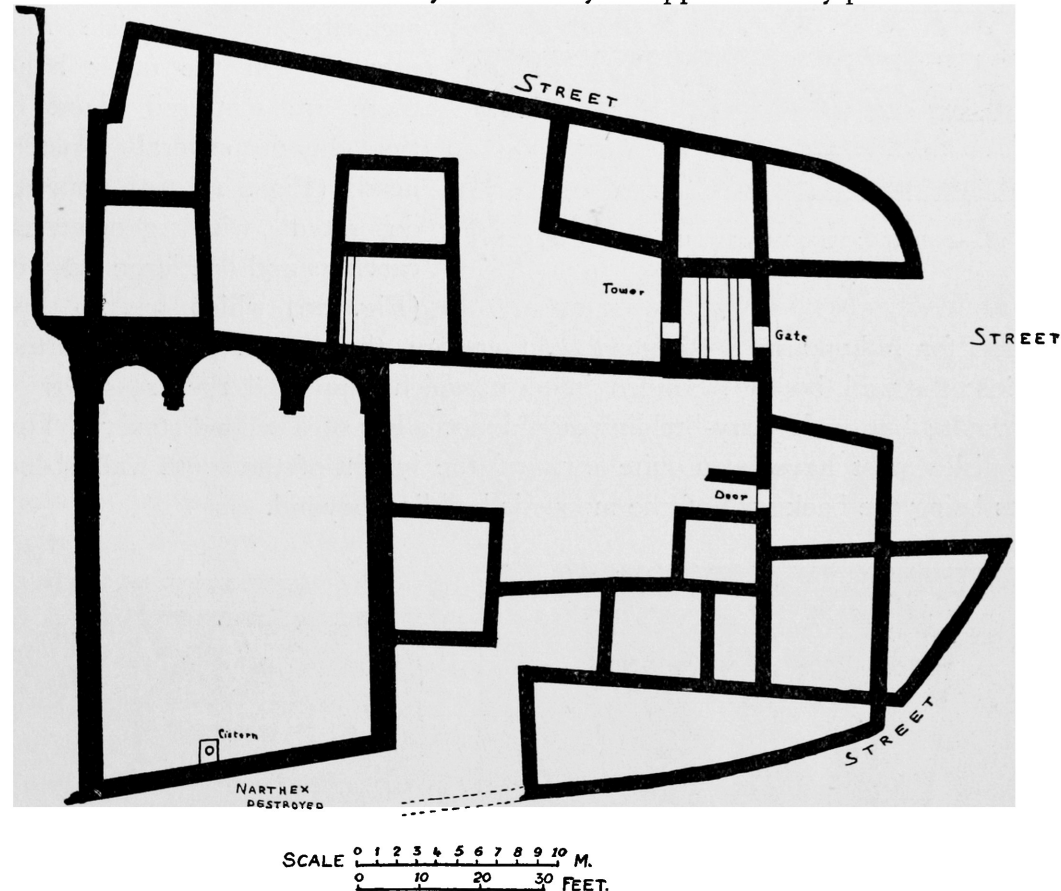


FIG. 17.—ESBEITA : CENTRAL CHURCH.

the church there was no great depth of rubbish over the floor ; its whole area was strewn with column-drums (having a diameter of 0·52 m.) ; but none of these was in place, and the intercolumniation was therefore uncertain. Of the three apses only that of the south aisle remains intact ; the top of the central apse and the whole of that of the north aisle have collapsed. The apses are as usual of chalk ashlar : probably they were once painted (Plate XIX, 1).

The south wall is standing to a height of five metres and has no windows : the lighting of the church must therefore have been by a clerestory. There does not seem to have been a triforium. Over the south apse there are no traces left of an upper chamber. The south wall, which stands high above the top of this apse, is of flimsy construction, not strong enough to take the outward thrust of an upper vault, and shows no signs even of pilasters to

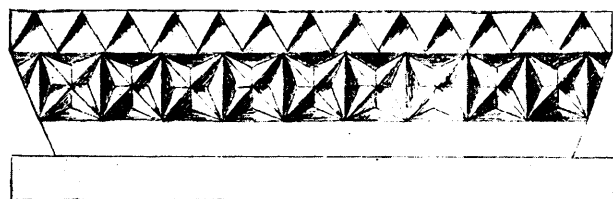


FIG. 18.—ESBEITA : THREE-SIDED PILASTER-HEAD, CENTRAL CHURCH. (1 : 8.)

support the springers of the arch-ribs of the aisle roof proper. On the other hand there are scattered about in the church several pilaster-heads (Figs. 18, 19), roughly decorated with geometrical carvings and one large bracket (Fig. 20) which has no pro-

jection for in-bonding. Presumably, therefore, there were pilasters butted against the wall, but not bonded in to it, which supported the cross-ribs of the vault ; but such jerry-building would not allow of a second storey. The side aisles must have been quite low, and the height of the south wall is due to its being the back wall of the monastic building beyond.

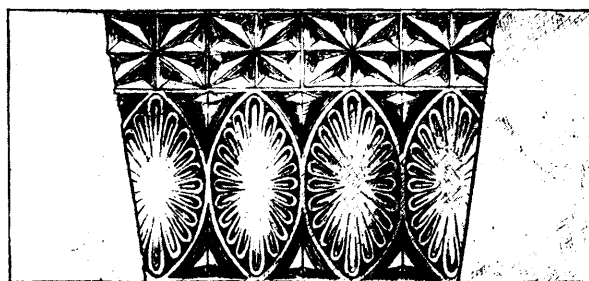


FIG. 19.—ESBEITA : PILASTER-HEAD, CENTRAL CHURCH. (1 : 8.)

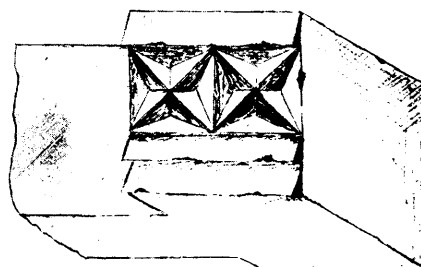


FIG. 20.—ESBEITA : BRACKET, CENTRAL CHURCH. (1 : 8.)

How the church was roofed it is impossible to say. There was not sufficient débris to account for a rubble and cement vault supported on ashlar ribs, and the stone voussoirs lying about were not enough for the arches that certainly existed, much less for any ashlar vaulting. No traces of burnt wood were visible on the surface ; but on the whole we inclined rather to the theory of a roof of timber overlaid with earth lying across the rib arches.

The cistern-mouth, usually found in the middle of the outer court, was in this case inside the church, at the west end of the central aisle. Close by this was a drum of an engaged column having a narrow square cap with rosettes carved along its edge (Fig. 21).

Attached to the church was a monastic building (*see* Plan, Fig. 17) which occupied the greater part of the *insula*. The main entrance was at the south end, under a tower flanked by two irregularly projecting wings and fronting on a small open space. This is the gateway figured by Palmer (*Desert of Exodus* ii, 375), the most elaborately decorated piece of architecture in the town; but since Palmer's day it has been largely destroyed—the carved jambs have fallen down and the lintel with its curious heraldic ornament has apparently been removed and sold. The tower, which is solidly built, still stands two storeys high and seems to have had a third storey. Passing

through its lower chamber one enters a small irregular courtyard with a cistern in its centre, a room on either side and two facing the gateway; past these a narrow passage leads to a small courtyard with two rooms fronting on it. In the middle of the west wall of the first court there seems to have been a doorway, but it is



FIG. 21.—ESBEITA: ENGAGED COLUMN-DRUM, CENTRAL CHURCH. (1:8.)

almost completely obliterated by piles of débris. It gave access to a third courtyard surrounded on all sides by chambers; these buildings were all two storeys high. In the middle of the south side was a passage leading to the two rooms of the projecting south-west wing. From the north-west corner, doors through two adjoining rooms led to the narrow space between the screen-wall of the church and the enceinte wall, which in this church took the place of the ordinary forecourt.

The whole building was, with the exception of its front door, devoid of ornament; it was also in so ruinous a state that its plan was difficult to determine and in some smaller respects is incomplete.

The South church was of the regular plan (Fig. 22). Its forecourt or narthex, separated from the body of the church by the usual screen-wall of chalk

ashlar pierced by three arched doors, was small and sufficiently narrow to be vaulted over; a door at its south end led to the ground-floor chamber of the campanile, now much destroyed but recognizable by its complex of constructional walls and vaulting. This tower was probably never very high, as its walls are not particularly thick; at present it consists of two low storeys, each lit by a window in its south wall. These windows were shielded from profane view by a high, thin wall, which, running in an irregular curve, enclosed a sort of light-well and shut off this face of the tower from the public street.

THE SOUTH
CHURCH.

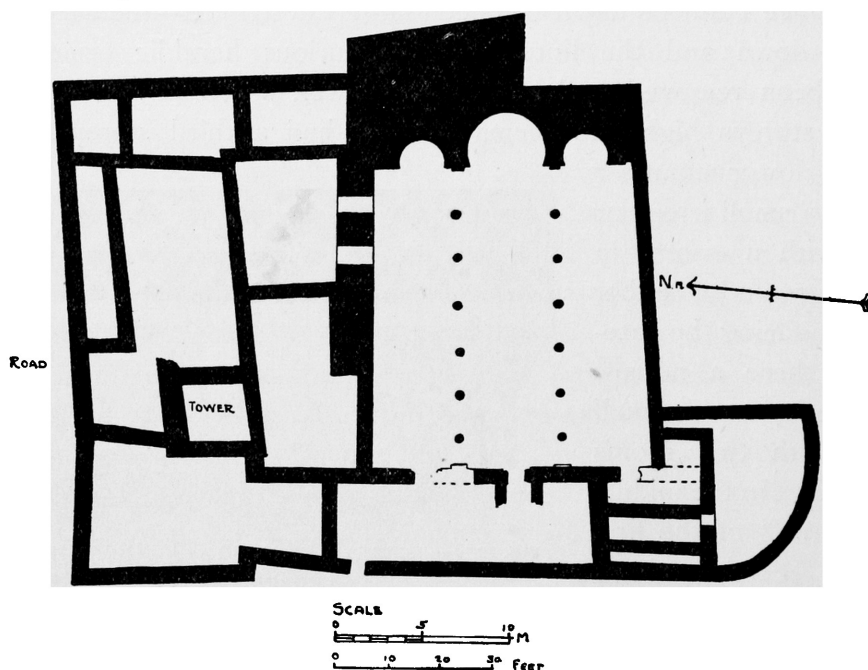


FIG. 22.—ESBEITA: SOUTH CHURCH.

The east end of the church was standing fairly complete (Plate XIX, 2). There were three apses forming the ends of the three aisles: the two smaller of these had arched apsidal recesses with chamfered edges whereon was indented moulding, let into their back walls; the larger central apse had round its arch a simple herring-bone incised pattern; but otherwise the apses were quite plain without even a string-course to emphasize the springers of the dome. The side apses had each three square holes cut in the roof as if for a baldachino.

The aisles were separated by arcades of six columns decorated with

bands, incised or in relief: the drums showed a diameter of 0·55 m. and there was a space of 2·05 m. between the columns. The voussoirs were plain. No capitals were visible on the surface of the ruins. Part of a capital carved in chalk with a simple tooth moulding was found, but it was on a small scale and probably came from a door.

Over each side apse was a vaulted chamber with walls of chalk ashlar, but these seem to have been walled-off on the west side and it is difficult to see how access to them was obtained. The north wall of the church stands fairly high with no sign of windows, and had monastery buildings against it. The south wall (ruined down to ground level) was too thin to have supported more than a single storey; the church must therefore have been lighted by a clerestory, but there was no ambulatory connected with the chambers over the side apses. These chambers do not seem to be merely constructional, so were probably approached by stairs from the side aisles.

The church was singularly barren of stone-carving; on the other hand it showed more traces than remained elsewhere of the *tempera* painting which must have been the commonest form of church decoration.

On the central apse no more than a few faint traces of colour survived. In the southern apse alone could any coherent design be distinguished, and here the colours had faded under exposure to the light, most of the surface had been scraped away by iconoclasts, and rain-water had brought down lime from the upper ruins and left a thick white deposit over the whole wall-face. Only by wetting the stone were we able to make out and roughly to sketch the original painting. The subject was the Transfiguration. In the centre is Christ, full-face, with hands raised and brought together over the breast. The *chiton* was seemingly of light pink edged with gold, the *himation* of dark blue; the halo was a plain yellow ring with white centre; the vesica of light pink. The figure was too much damaged to be copied. Below the feet is a semi-prostrate figure, probably of S. Peter, and beyond, on the spectator's left, a kneeling figure identified by a fragmentary inscription . . . ANNIE, in red paint, as S. John; turning half-round to the front he raises his left hand, as if pointing to Christ. A few lines on the right of the vesica are all that is left of S. James. On either side of the apse, a little distance from the central group, a blurred mass of red colour seems to represent figures standing on a slightly higher level than the Apostles: these are presumably Moses and Elijah. Below the feet of the figures is a broad red band. The tooth-pattern round the arch of the small recess was picked out in red

and blue, and its vault was roughly painted in red with a coarse network pattern, each mesh having a cross as filling-ornament. The recess in the northern apse was similarly decorated, but the design on this apse itself was indistinguishable.

It is clear that Esbeita came to a violent end. All the gates of the town have been blocked with roughly-built barriers of stone, and stone barricades have been piled across many of the streets; everything points to a desperate attempt to hold the place against an enemy who ultimately took it. Moreover the whole evidence of the ruins is to the effect that the town's occupation ceased suddenly and uniformly. There are many cases of alteration or reconstruction of buildings, such as must occur in the life of any town, but there are no signs of gradual decadence or of practical desertion. Here and there the stones of fallen walls have been used to make new water-runnels, leading to such cisterns as were not blocked by débris, but this is clearly the work of nomads who visited a site already in ruins. The water-courses block streets or run through house-sites: many are of comparatively recent date, several are still used by the Arabs. It all looks as if the people of Esbeita had left the town one day in a body, and had never returned to it, and their houses had fallen to decay simply for want of anyone to repair them.

The beginnings of the town are almost as clearly defined. The alterations and rebuildings show no development, just as they show no decadence; considering the poor construction of the houses, they are indeed remarkably few. There are no remains that point to a time before the building of the town on its present lines, nothing that goes back to a pre-Byzantine date. The earliest pottery found upon the site is not earlier than the third and may well be as late as the fifth century A.D.; the rubbish heaps of the town are small—very different from those of Khalasa—and argue a short period of occupation. Though the site is fairly deep in débris, yet, as it stands upon a shelf of rock, it is not difficult to see that there is nothing earlier underlying the present buildings. What Palmer took to be the remains of a broad, early wall running round outside the present limits of the town is really only the earth and stone water-channel of which mention has been made above. Esbeita is a Byzantine town pure and simple, founded not very early in the Christian era and destroyed, not long afterwards, by the Arab conquest.

Palmer (*Desert of the Exodus*, ii, p. 379), following Rowlands, identifies Esbeita and Mishrafa with Zephath and Hormah, scene of the discomfiture

of the mutinous Israelites when, after the return of the spies, they attempted a direct advance into Palestine. This identification has been followed by other writers. Palmer supposes that Mishrafa was originally Zephath of the Amorites, and that the name was later transferred to the more important lower town (Esbeita), when the Israelites gave the name of Hormah to the hill fort on the occasion of its destruction at their hands.

All archæological evidence absolutely contradicts any such theory. Neither Mishrafa nor Esbeita had anything to do with Israelites or Amorites, or existed before the Christian era.

The identification was a purely fanciful one, based on the similarity between the names Zephath and Esbeita. Should it be argued that the archæological evidence is at best negative, and that Esbeita may have inherited the name Zephath though on a new site, and that the ruins of the older town may have escaped our notice in the neighbourhood, we cannot, of course, deny this possibility. But it must be pointed out that in the biblical account of the raid on the land of deferred promise (Numbers xiv, 45) mention is not made of Zephath, but only of Hormah. Even if in this context Hormah is a proper name rather than meaning "destruction," it is a name that could be applied to any scene of defeat; thus in Numbers xxi, 3, it is given to Canaanite cities in the neighbourhood of Arad destroyed by the Israelites. This Hormah, therefore, is not the same as that of Numbers xiv, 45. Only in Judges i, 17, are Zephath and Hormah coupled together. In fact, there is nothing in the Bible record to connect Zephath with the abortive invasion of Palestine by the mutineers against Moses. The only Bible reference to Zephath (Judges i, 17) would seem to place it farther north, in the neighbourhood of Arad, Gaza, and Askelon; there is nothing except a resemblance of names to connect Zephath with Esbeita. Zephath, Palmer says, means a watch-tower, which description is not applicable to Esbeita (and his theory of the transference of names is hardly a tenable one); and the actual evidence afforded by the sites definitely excludes their antiquity.

Five thousand yards from Esbeita, on the opposite side of the valley, are the ruins known as Mishrafa. Here, between two wadies which run into the great Wady Migrih, there juts out a long spur of high ground with steeply sloping sides ending in a limestone outcrop which stands sheer two hundred feet over the flint-strewn slopes of the valley's edge. Behind, the spur widens and divides, Y-shape, the two arms

like cols leading back to the high tableland of the Negeb and separated by the cup-like depression of a deep wady head.

Approached from Wady Migrih, especially if one be coming from the north, the appearance of the place is very striking (Plate XVI, 1). Buildings can be seen crowning the hill-top; square towers of ashlar masonry rise from its edge; and at intervals other towers, their feet planted twenty or thirty

feet down the scree slopes, lean like great bastions against the scarped face of the rock.

On a nearer view the place is less impressive. Behind, across the neck of the spur, runs a flimsy dry-stone wall, never of more than a man's height, with a narrow arched gateway not even defended by a tower.* Of the enclosed area, a goodly proportion was taken up by three shallow basins or catch-pits lined with rough stones and mud, communicating by means of narrow openings with one another and with a débris-filled cistern.† They are, of course, intended for the conservation of rain-water, and

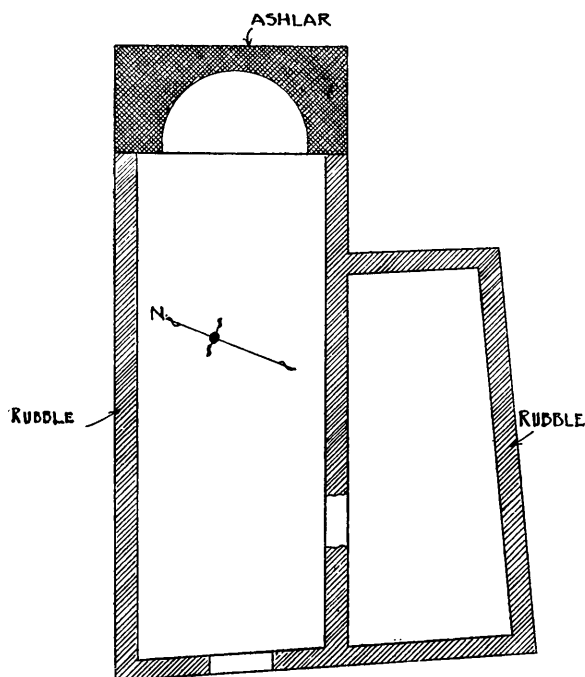


FIG. 23.—MISHRAFA, CHURCH. 1 : 260.

they afforded the only supply available for the inhabitants of Mishrafa; but then these were hermits. There are only two buildings on the hill-top proper. One was a small house of three vaulted rooms opening into a courtyard; the other was a small church with one aisle, a single apse, and a small square-ended side chapel (Fig. 23): The apse was of chalk ashlar, the walls were poorly built of small rubble; there were no signs of decoration.

Besides these, there are some seventeen buildings along and against the cliff. Every one of these apparently consisted of a small two-roomed house of

* Plans of Mishrafa (both bad) are given by Palmer, *P.E.F. Quarterly*, 1871, and Musil, *Edom*.

† These are the stone circles mistaken by Palmer for the remains of a prehistoric fort

chalk ashlar, built low down against the rock face (the bastions of our first distant view), and of a smaller square tower on the edge of the hill-top, seemingly independent, but really connected with the lower building by a shaft hollowed out through the rock. There can be no doubt that this is a monastic community, a "laura," wherein each recluse (or pair of recluses) had two lower cells and an upper tower, while the church served their common need, and the house on the hill-top was perhaps the guest-house or the lodging of the brother superior.

There is no trace of early work in stone, and no early pottery visible upon the surface; and as the rocky surface is quite bare of soil, it can be safely affirmed that there is nothing below ground older than the existing building. Mishrafa, on its exposed hill-top, looking over a barren land, was not likely to gather about it the houses of lay settlers, as did probably the monasteries of Esbeita; it ended as it began, a hermitage. Though monastic buildings are common enough in this southern country, as at Tell Sawa, Abda, and El Auja, yet this is interesting as the only example that we found of a hermitage retaining the system of isolated cells gathered about a common centre.

The town of Abda is built upon the top and down the steeply shelving face of an isolated rocky spur, some three hundred feet high, which should connect with the eastern hills, but runs out into the broad valley wherein
 ABDA. join the torrent-beds of Wady Ramliya and Wady Murra. As one climbs over the low ridges (that to the south-west shuts off the upper waters of the Wady Ramliya), and first comes in sight of Abda, the view is an impressive one (Plate XXIV, 1). The town is seen in profile. Upon the summit of the hill, which seems higher than it really is, rise the long walls of the well-preserved fort; the well-nigh precipitous face of the rock is blotched with black cavern mouths, half masked by the honey-coloured masonry of their ruined house fronts. At first, indeed, these caves are the only evidence of man's occupation visible; but as one comes closer the whole slope from skyline to hill's foot is found to be a mass of tumbled ruin. The rock face has been cut into terraces—four irregular steps upon which stood houses whose front rooms were of ashlar masonry backed against the rock face, while their rear rooms were caverns hewn in the rock itself. When the tiers approached too closely, the floors of upper caverns have collapsed into those below. Not the buildings only, but often the rock walls themselves have fallen forwards and crushed the houses of the lower terraces; the paths that joined them have fallen away or been buried deep in débris.

These ruins occupy the two sides of a small tongue projecting westwards from the main block of the hill (Fig. 24). The flat summit of the spur is entirely taken up by one great complex of buildings. At the eastern or inland end of this is a fortress (Plate XXIV, 2), a long rectangle whose heavy ashlar walls with square projecting towers enclose a wide area unoccupied by buildings (Plate XXIII, 2); at the west end, overlooking the town, is a monastic building amongst whose numerous chambers and

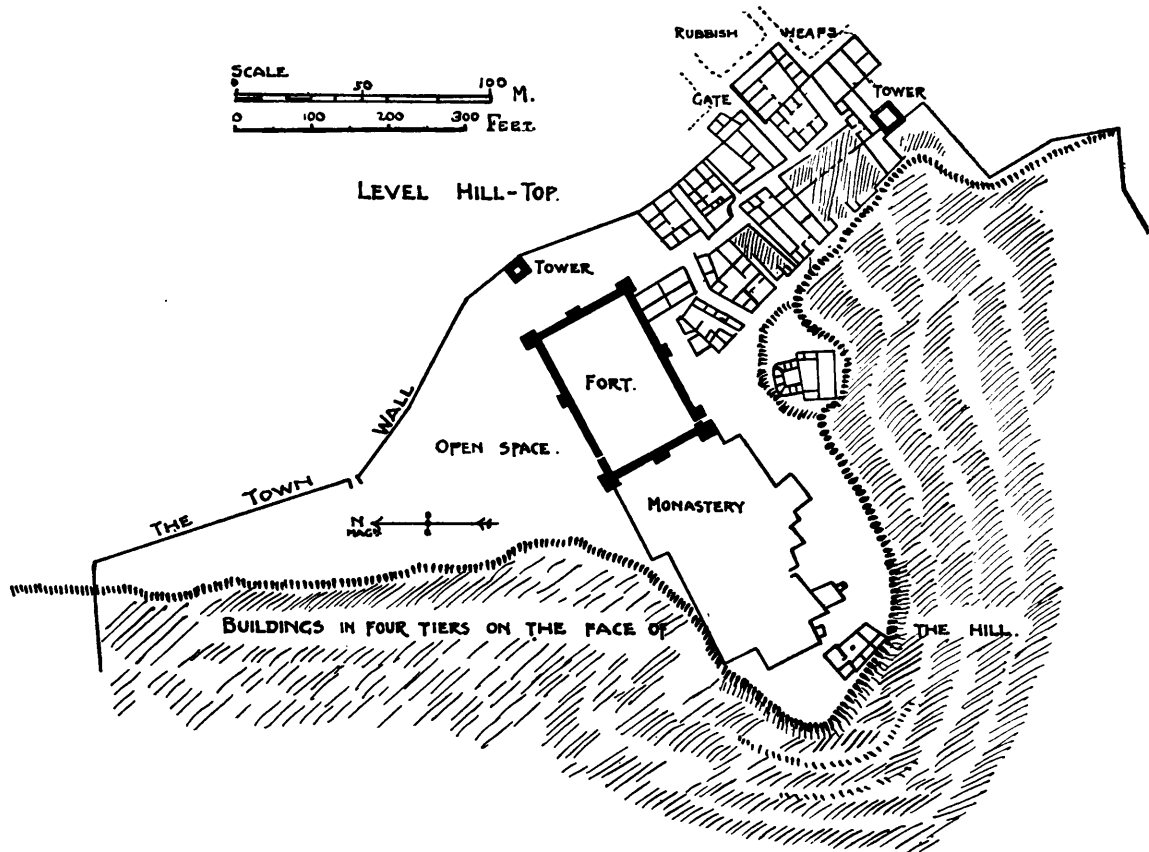


FIG. 24. ABDA: SKETCH PLAN OF UPPER TOWN.

courts can be distinguished the remains of two churches. To the south of the fort lay a small quarter composed for the most part of fairly large and well-built houses, probably those of officers of the garrison. The outer walls of them, fronting on the flat ground of the hill-top, were continuous and formed a defence-wall which was prolonged northward so as to enclose the fortress and a stretch of unoccupied land beyond it; it was a poor low wall of dry-stone rubble masonry, but was strengthened by two small ashlar towers

two storeys high, one at its south end, one towards the north over against the east end of the fortress (Plate XXIV, 3). At either end the wall turned sharply down hill, and seems to have been carried round the whole area of the Lower Town ; but it was too ruinous and fragmentary for its course to be followed with any certainty.*

Abda has been visited by several travellers, including Palmer, who made a rough plan of the fort ; the site was carefully examined and planned in 1904, by the PP. Jaussen, Savignac, and Vincent, whose excellent publication in the *Revue Biblique* (Nouvelle série I, 1904, pp. 403-424), had I but known of it, would have spared me the trouble of much repetition and would also have enabled me to re-examine and check certain points which, single-handed as I was, I missed altogether. Thus, engrossed in the town buildings, I failed to see either the "Roman" camp on the northern point of the hill-top or the "High Place" to the south of the Upper Town ; for these I can only refer to the authority of the Jerusalem Mission. To compensate in some measure for this lapse, I discovered under the ruins of the monastery the remains of a great Nabatean temple, dedicated perhaps to the hero Obodas, whose tomb was at Eboda.

Between the east end of the fortress and the enceinte wall, and also beyond this, running under the rubbish heaps of the Byzantine town, there could be traced the walls of stone buildings which clearly were of earlier date than the houses now standing and had been intentionally destroyed, and their sites carefully levelled, at the time when the latter were built. From the débris that had been thrown into their ruined chambers to form the new plateau I picked out fragments of Greek pottery of the third or early second century B.C. It is obvious, therefore, that we have here not the immediate predecessor of Byzantine Eboda, but a settlement separated from it by the lapse of several centuries, the Nabatean town where Obodas was worshipped.

The buildings that form the western front of the monastic building are very remarkable (Fig. 25). The point of the tongue of rock has been levelled and left open ; from this there rises a massive retaining-wall six metres high, forming a podium to the building above. The floor, supported by a series of cross walls joined by rough arches or horizontal tie-slabs, was flush with the general floor-

* As marked on the plan in the *Revue Biblique*, 1904, p. 404, it is not really the outer wall of the town at all. Nearly half the buildings lie outside its line as there suggested.

level of the buildings behind ; for this podium only masked a natural rise of the rock from the western tongue to the main plateau on which lay the monastery and fort. Solid as the structure was, much of it had collapsed in a cascade of great wall-blocks and column drums, but on what remained the bases and even the lower parts of the shafts of several columns were still to be seen standing in their original positions. The buildings above were at first sight so confused a complex of irrelevant walls that former visitors had abandoned the site as of little interest. On a closer view, however, evidence of two distinct periods was obvious. The columns still in position had been joined together by curtain-walls which had concealed their existence, and in these walls were re-used building-blocks and fragments of cornice and ceiling. The columns were not originally part of the existing monastic building. Moreover, the retaining wall of the podium and one or two other walls in its neighbourhood are quite distinct in character from those of the monastery, the fort, and the houses of the town. The stones are larger and better cut. They seem to come from a different quarry, for instead of being honey-coloured they are more nearly white, hard, and very rich in fossils (fossils are rare in the yellow limestone). Generally, too, these stones are rectangular, whereas the Byzantine masons, influenced by Roman tradition, preferred to cut their stones wedge-shaped behind so as to bind in better with the rubble filling of the walls. Even with these criteria it was not always easy to distinguish relative dates, for the later builders not only incorporated whole existing walls in their own scheme of things, but also built new walls out of old material ; such reconstructions could only be distinguished by the misplacing of stones (*e.g.* the dressed face might be laid downwards) or by an admixture of yellow stones. However, by eliminating what is obviously late, *e.g.*, the walls that block the colonnade, the stair-tower at its south end, and the small chambers in the north-west angle, we are left with what can only be the western façade of a great classical temple. The lofty podium twenty-three metres long and crowned by a double row of columns, projected nine metres in advance of the main front which, if the building was symmetrical, had a total width of fifty metres. On the south the angle formed by the projection of the podium was filled by two long parallel walls which seem to have contained a staircase or ramp giving access to the temple from the lower ground of the hill's point. The columns of the outer row were six in number, of which five could be traced ; they were regularly spaced ; the bases were square, or stood on square blocks raised slightly above pavement level—the drums

measure 0·55 m. in diameter ; the capitals were simple, a square cap over a simple roll moulding. The inner row consisted of eight columns arranged in two groups of four each with a wider spacing between the groups ; the drums of the columns had a diameter of 0·62 m., the bases are round (Fig. 26). The southernmost column of this inner row lies almost as it fell ; the capital is missing, but the remaining drums give a total height of 3·60 m. for the shaft, a very probable measurement. On looking more closely at the ruins of the northern church we notice, first, that the two colonnades dividing the aisles differ in character, the north colonnade having square bases (the shafts are missing) while that on the south has round columns on round bases ; secondly, that both the measurements of these, and their moulding, agree with those of the temple façade ; and thirdly, that both rows of columns are continued westwards beyond the needs of the church, the western columns being embedded in and hidden by the screen wall. Further, one base appears in position in the atrium of the church. Clearly this is only the northern colonnade of the original peristyle temple, re-used without further change by the church builders. Probably excavation on the south side of the temple site would bring to light traces of the corresponding colonnade under the heap of débris that there cumbered the ground. The north wall of the temple has disappeared, as has the wall of the church, but the two seem to have coincided. Unfortunately the cella has been completely destroyed, or, if traces of it remain, they are buried under the chambers and courts of the monastery.

This great temple, grandiose in plan but extremely simple in detail, is certainly not of Roman origin* ; it must, together with the houses that lay along the hill-top behind it, which were dated by pottery fragments to the second or third century B.C., belong to the Nabatean Kingdom of Petra. It is not surprising to find an important Nabatean outpost here. Its existence indeed was known from the remark about the cult of Obodas practised here, quoted from Ouranios by Stephen of Byzantium ; its *raison d'être* is explained by its position between Petra and the Mediterranean ports. It is true that the Tabula Peutingeriana puts Eboda on the road between Elusa (Khalasa) and Aila, and does not show any cross-connection between

* Not only is its style different from what analogy would lead us to expect in a Romano-Syrian temple of imperial date, but the methods of construction are quite un-Roman. An imperial temple of this size and in this position would not have had mere dry-stone foundations, with the material for concrete abounding everywhere.

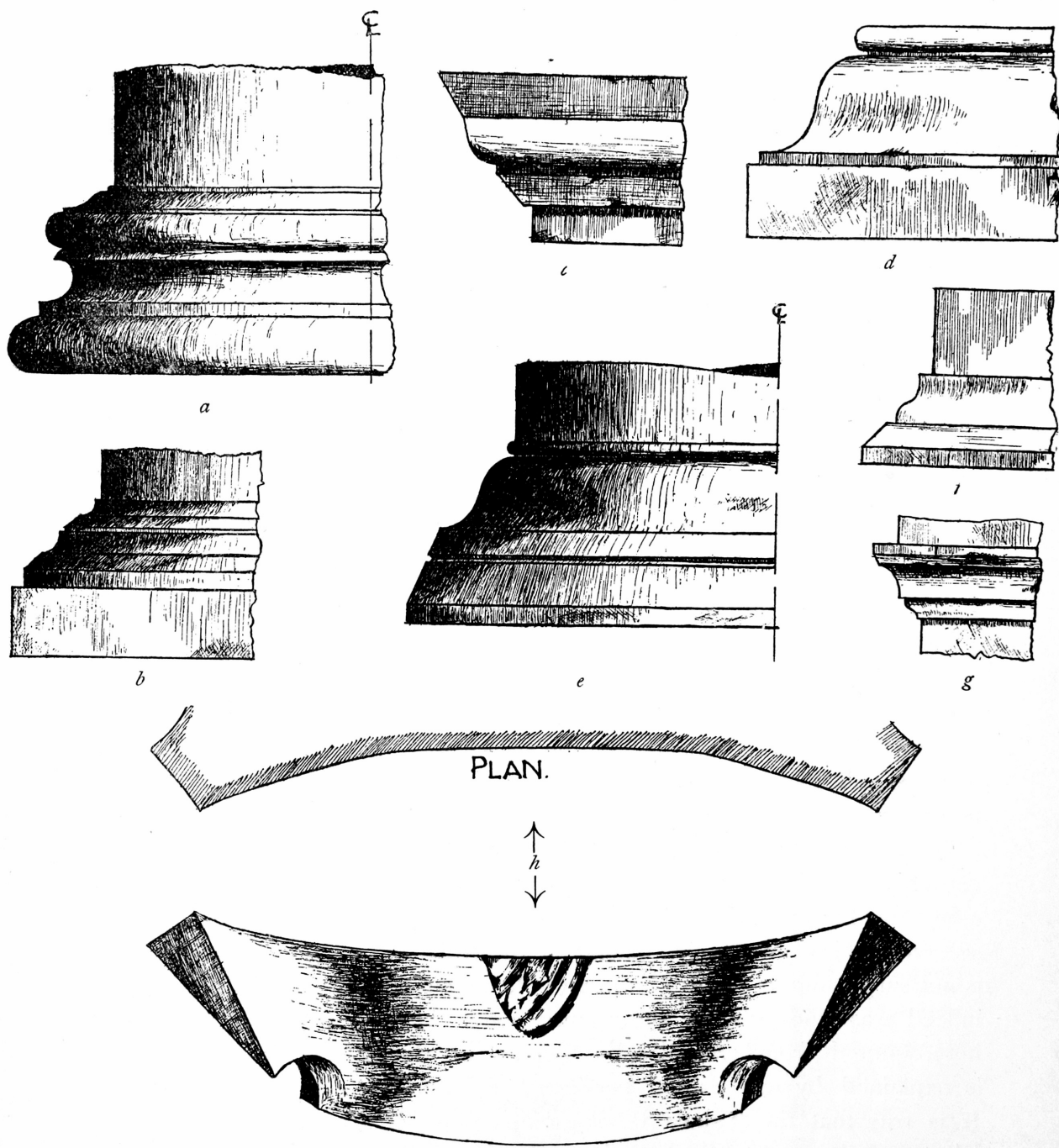


FIG. 26.—ABDA: LIMESTONE ARCHITECTURAL MEMBERS FROM SITE OF NORTH CHURCH. 1 : 7.

- | | |
|-----------------------------------|---|
| (a) Column base in North Church. | (b) Column on square pedestal in chamber to West. |
| (c) Cornice near East end. | (d) Cornice (or base?) outside East end. |
| (e) Column base at East end. | (f) Cornice, East end. |
| (g) Stringcourse in S.E. chamber. | (h) Sketch of plain capitals. |

Eboda and Petra ; but by the time that map was compiled the trade of Petra had ceased to exist. Moreover, it is true that, while there is a road from Khalasa to Abda, this road, in the neighbourhood of Abda itself, is extremely bad. From Abda a reasonably good road runs south to Sahala, and this is perhaps the road of the Peutinger Table. From Abda to Petra two roads are possible, but both are bad and one is not really practicable for a laden caravan. The best Petra road runs direct from Khalasa* to Nagb el Gharib, leaving Abda to the south-west, then crosses the Wady Murra, runs past Ain Gattar and W. Merzaba (being here called the Darb Sultaneh, the King's Highway) and joining the Kurnub road at Ain Weiba makes across the Araba to Petra. Eboda therefore does not lie on the main road from Petra to the Mediterranean, but it is between two roads, and to guard a desert track from the raids of nomad tribes there is required not so much a stationary fort as a base for patrols. Abda may well have served such a purpose ; the position of the hill, rising out of a large and fairly fertile plain, and perhaps also some religious considerations, may have determined the actual situation of the town. When Petra was destroyed by the Romans, Eboda was no longer necessary and seems to have been deserted, falling gradually into decay. Only when the Khalasa-Aila route was revived, as the Peutinger Table shows that it was, did the old site again become important, and the ruins of the Nabatean town were razed or re-used for the construction of the Byzantine fort and monastery.

I have not mentioned here the Roman camp lying to the north of the town.† Judging by its plan, it is of quite late imperial date. Though I did not see it, I venture to doubt the theory put forward by its discoverers that it was dismantled and that the fortress and wall-tower were built out of its material. The stone dressing of these buildings is precisely in keeping with their period, identical with that of Esbeita and El Auja ; with all due caution I should suggest that the camp was a rather rough and temporary affair not much earlier in date than the fort itself, possibly even used while the fort was building.

Perhaps the caves were all originally Nabatean tombs re-used as dwelling-places by the Byzantine settlers. If so, they were so radically re-cut by these

* See on p. 146 a Nabatean inscription found by us at Khalasa, illustrating the through connection between the two towns. Khalasa itself may even have been a Nabatean foundation.

† See *Revue Biblique*, 1904, p. 414.

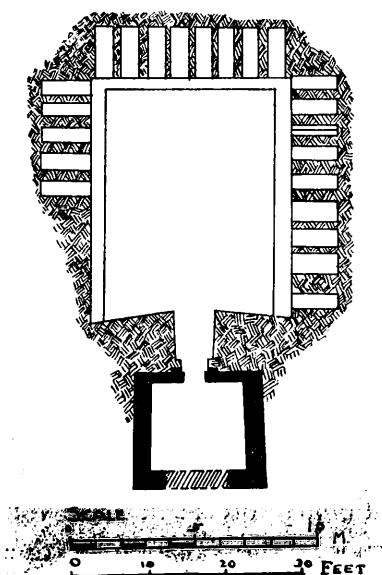


FIG. 27.—ABDA : GREAT ROCK
TOMB.

latter as to lose all their original character. It is equally possible that many of them were used in the earlier as in the later period for houses, and that the Nabatean town extended down the rock face as well as over part of the upper plateau. However that may be, the great tomb south of the town (Fig. 27) is the only one that preserves its funerary niches, and in it alone were found remains of Nabatean tomb-ornament. Unfortunately the stelæ that were built into the wall of its little vaulted fore-chapel had borne only painted inscriptions of which now no trace remains; only the lintel and door jambs (Figs. 28, 29) were carved, and one stela adorned with two small busts long since defaced (Fig. 30).

The portico of the Nabatean Temple was,

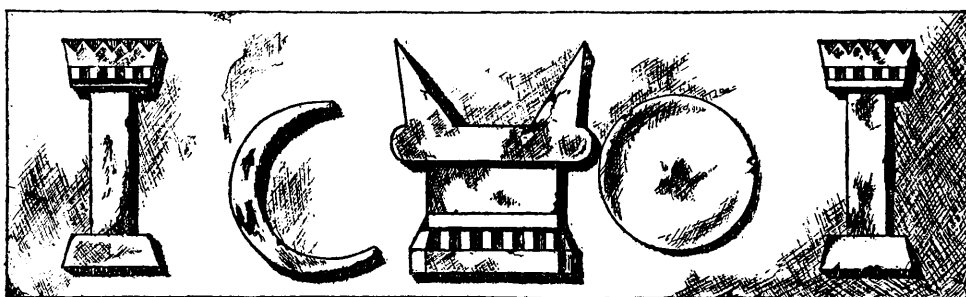


FIG. 28.—ABDA : CARVED LINTEL. 1 : 9.

as we have seen, divided up by curtain walls into small cells.

The old ramp or staircase had been destroyed, and to replace it a small stair tower was built with steps radiating from a central pillar. Behind the portico was a small irregular courtyard surrounded by vaulted cells; one of these on the south seems to have been

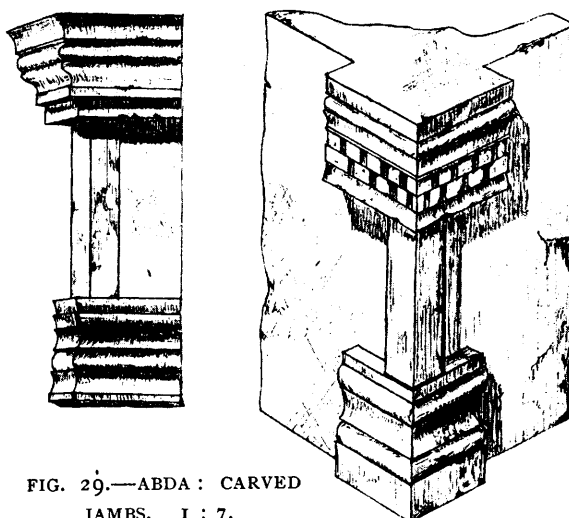


FIG. 29.—ABDA : CARVED
JAMBS. 1 : 7.

used as an oil-press. A cell at the north end of the portico communicated by a small doorway with carved capitals (Fig. 31) with the narthex or ante-chapel of the north church. Here, as in the portico, the flagstones of the old temple peristyle were preserved, as also its columns; two of the latter, however, had been shifted to flank the doorway in the screen wall giving on the central aisle. There was only one apse, supported on either



FIG. 30.—ABDA: STELA WITH BUSTS. 1 : 8.

side by two columns; the side aisles were square ended, though that on the south seems to have had a small vaulted room at its east end. A large capital with rude carvings of a bird and a man (Plate XXIV, 4), a decorated voussoir, and a moulded string-course (Fig. 32) seem to belong to the apse. The church was dreadfully ruined and presented few points of interest.

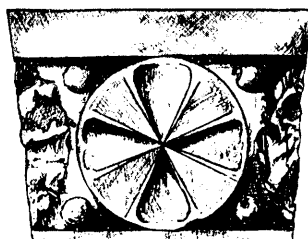


FIG. 31.—ABDA: CARVED CAPITAL IN SOFT LIMESTONE OF DOOR-JAMB IN ROOM W. OF NORTH CHURCH. 1 : 7.

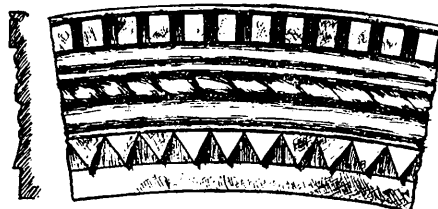


FIG. 32.—ABDA: MOULDED STRING-COURSE. 1 : 8.

From the small courtyard a narrow passage led between irregularly built chambers, past a gateway in the south wall, into the Great Court, a large open space stretching from the east end of the north church to the fort and past the main north wall to the south church; chambers lined a part of its north and south sides. On the south a door gave access through a vaulted passage to the atrium of the south church; this as usual was surrounded by cells. To the west stood the campanile; in the centre was a large reservoir. The screen

door giving on the central aisle was elaborately decorated with pilasters and crosses with simple capitals and a plain moulded lintel (Fig. 33). The east end was a high-piled mass of débris, but the three apses seem to have been unusually deep, their sides being continued by a vaulted passage prolonging the colonnades. Only one column was in place, so that the intercolumniation remains uncertain. At the east end, on the line of the north colonnade, there was found in the rubbish covering the floor a marble slab measuring 1·50 m. by 0·50 m. bearing the funerary inscription of Zacharias, son of Erasinus (Fig. 34 and p. 143). Probably this stone gives the date

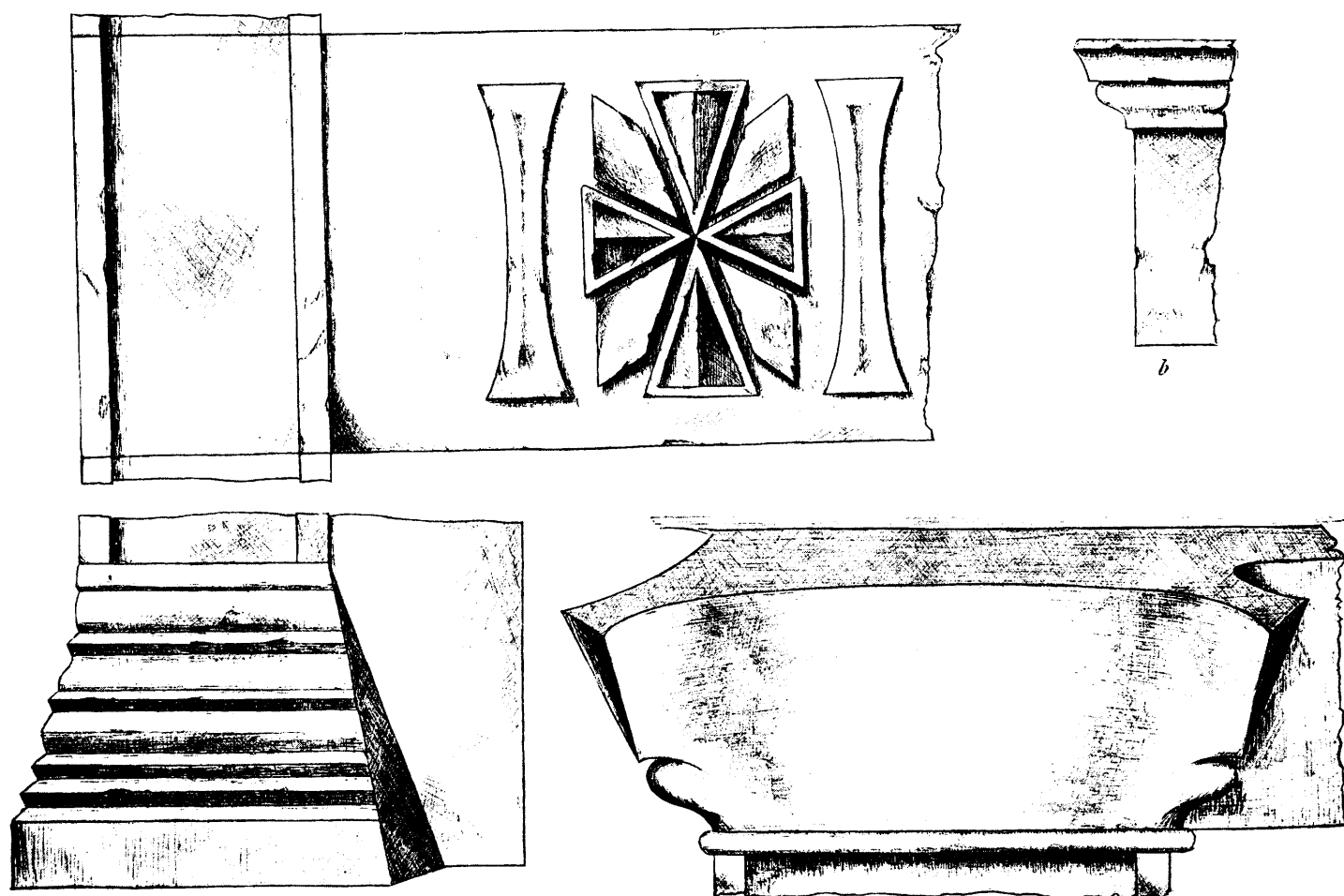


FIG. 33.—ABDA : SOUTH CHURCH. DETAILS OF MAIN DOOR IN SCREEN. 1 : 10.

- (a) Jambs (same on North side).
- (b) Lintel.
- (c) Capital.

of the consecration of the church, 581 A.D. A curious point was that the wall of the corner tower of the fort was prolonged over the roof of the apse—an obvious gain from the defensive point of view; and this may well be an argument for the monastery and fort being contemporary.

The fort is simply a rectangle, with square angle and side bastions; the walls are from 1·20 m. to 2·00 m. thick. In the corners are stairways to give access to the wall tops and towers (Plate XXV, 1). There are no window

THE FORT. apertures. The towers consisted of two storeys, their chambers roofed in the usual way with stone arches and cross-slabs. The main doorway was in the south-west corner, defended by two flanking towers. The doorways leading to the towers had flat lintels with relieving arches above; the small north gateway had a double arch—a wider and higher arch on the inner wall-face, and a smaller arch on the outside. Above the door, on the outer wall-face, was a cross and the monogram $\overline{\text{IMT}}$ AW . In the door-jambs were the deep slots for the locking-beams. In the east wall was a small undefended gateway leading to the intramural area behind the wall tower. The interior of the fort was empty except for some low foundations in the north-east corner, apparently those of a platform rather than of a room, and of a similar low structure against the south wall. There was a large cistern in the middle of the open area, with the ruins of a cistern-house above it, and remains of an open drain leading to it from the east gate. Towards the north-west of the enclosure a curious rock, artificially cut, seems to have been a sort of rostrum. The western gate is covered by débris, and its existence was not satisfactorily verified.

The building is poor. The stones of the outer face are small, but well cut; the inner face is, in parts, of good ashlar, in parts of coursed rubble. The wall faces are lightly pointed with lime, the interior grouting is all with mud. The work looks both hasty and late. In all parts of the site the same remark

†ΑΝΕΠΤΑΗΟΜΑΚΑ
ΡΙΟCΖΑΧΑΡΙΔC
ΕΡΑCΙΝΟYΕΝ
ΗΗΝΙΤΑΝΕΜΟΥ
ΔΕΚΑΤΗΙΝΑΙΔΗ
ΗΕΡΑΚΥΡΙΑΚΗΩΡΑΝ
ΤΡΙΤΗΤΗΕΝΥΚΤΟCΚΑ
ΤΕΤΕΘΗΔΕΕΝΤΑΥΘΑ
ΤΗΤΡΙΤΗΤΟΥCΑΜΒΑ
ΤΟCΩΡΑΝΟΓΔΟΗΝ
ΠΑΝΕΜΩΔΩΔΕΚΑ
ΤΗΙΝΔΙΔΕΤΟΥCΚΑ
ΤΑΕΛΟΝCΙΝΟΣΚΕΑ
ΑΝΑΠΑΥCΟΝΤΗΝΤΥ
ΧΗΝΑΥΤΟΥΜΕΤΑΤΩΝ
ΑΓΙΩΝCΟΥΑΜΗΝ

FIG. 34.—ABDA: SOUTH CHURCH.
INSCRIPTION (SEE P. 143)
REPRODUCED FROM A BLACKENED
SQUEEZE. I: 14.

holds good, and, moreover, one finds many traces of work actually left unfinished—capitals half-carved, rock-hewn chambers left incomplete—a state of things quite consistent with a wholesale remodelling or complete building of the town

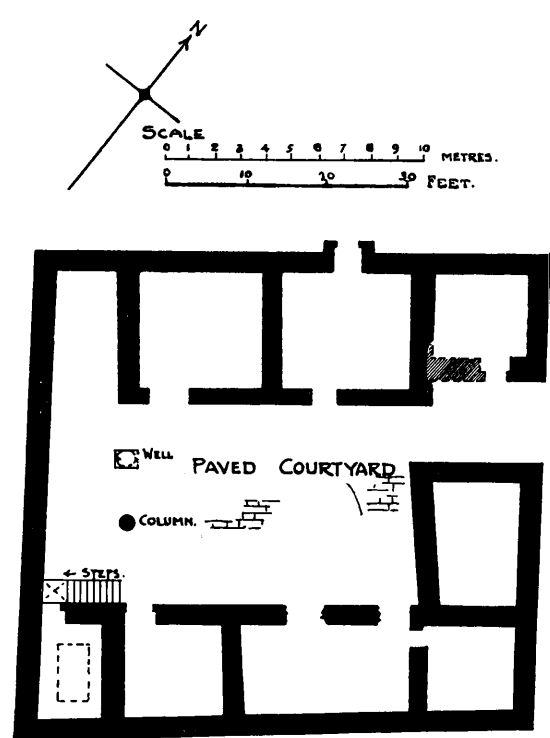


FIG. 35.—ABDA : ISOLATED BUILDING ON HILL-TOP.



FIG. 36.—ABDA : LIMESTONE CAPITAL FROM DOOR OF ISOLATED BUILDING. 1 : 8.

isolated building (Fig. 35) lying outside the walls to the south (the "fortin" of the map in the *Revue Biblique*); its front door had carved capitals (Fig. 36),

as late as 581 A.D., the date of the south church inscription (Fig. 34), and with its equally complete destruction in the middle of the seventh century by the Arab invaders. The small size of the rubbish heaps on the hill-top agrees with the theory of a brief life for the town. Such a theory must, of course, be reconciled with the appearance of Eboda on the Peutinger Table. If it be urged that that road map was compiled during the period when we suppose Eboda to have been virtually non-existent, it can at least be said on the other hand (*a*) that whatever the date of the map as a whole, we do not know to what recensions and additions it was subject, (*b*) that

our theory does not exclude the existence of a small settlement at Eboda no less unimportant than other stations in the Sinaitic desert which actually appear on the Peutinger maps. Judging from surface indications, Abda would seem to have been built about Justinian's time, on a Nabatean site which for many years had been either deserted or sparsely settled.

The houses of the Upper Town, lining both sides of a street running nearly north by south, are all modifications of the usual courtyard type. The most elaborate is an

and an outside staircase gave access to the second storey. Close to the south wall of the fort, on a slightly lower ledge of the rock, were the fragmentary ruins of a small building precisely like that outside the walls of Esbeita. Another similar building, also much ruined, lay on the flat ground south of the hill, a little way from the town. A hole had recently been dug in the middle of this, and showed a heavy deposit of ashes; the small cells at the north end were stone-flagged, and the walls contained lime (Fig. 37).

On the plain west of the town stands a small, well-preserved bath-house (Fig. 38). Two or three rooms have been almost wholly demolished, and the stones removed for terracing neighbouring fields; but of other rooms even the vaulted roofs of finely cut and fitted ashlar are almost intact (Plates XXI, XXII, 1). The little dome, supported on four arches, has collapsed (Plate XXV, 2). The hot air flues in the walls are noticeable, and seem to communicate with a furnace in the apparently solid mass of masonry which stands in an angle of the domed chamber; this would have been approached from outside, where there was a pent roof between two small courtyards; but the mass of fallen stones prevented the

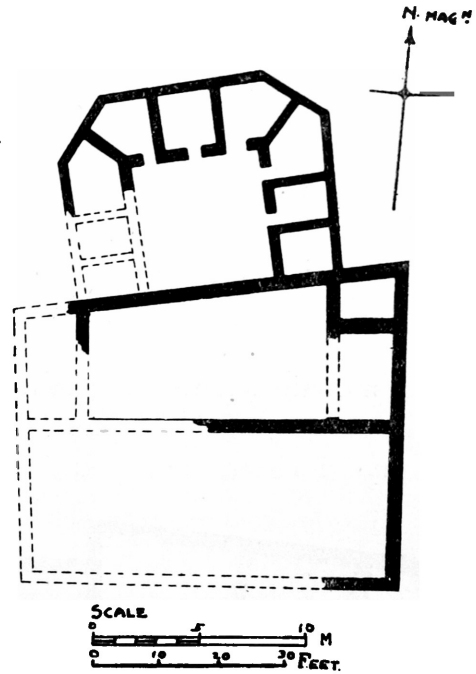


FIG. 37.—ABDA: BUILDING ON HILL-TOP S. OF FORT.

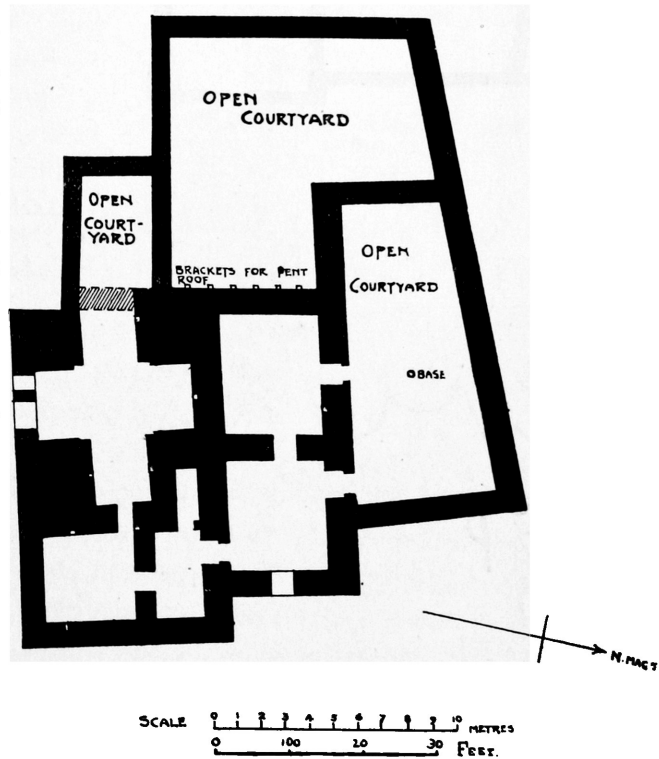


FIG. 38.—ABDA: BATHS.

verification of this theory. On a jamb of the main doorway was a fragmentary Greek graffito **ΚΕ** **OHΘICT** **IOY** (Fig. 39). By the baths was a large well,

ΚΙ ΟΗΘΙCΤ
\ / Ο V

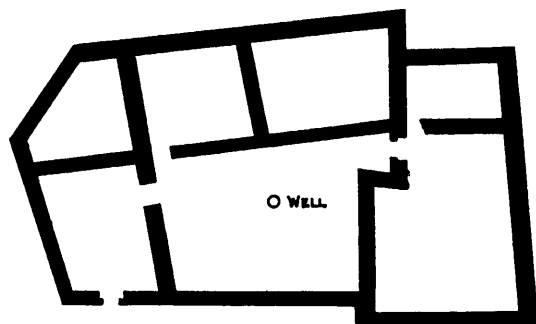
FIG. 39.—ABDA: GREEK GRAFFITO.

apparently of considerable depth, though now filled in with rubbish, above which had been an elaborate superstructure, with a water-wheel and drinking troughs for cattle (Fig. 40).

Not many cisterns were visible amongst the town ruins, probably because of the ruined

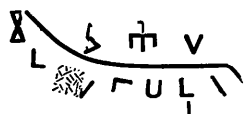
condition of the site rather than through any real lack of water-storage; one house standing on the end of the promontory below the temple façade had a courtyard cistern of unusual size. Probably here, as at Raheiba, the

inhabitants relied mainly upon stored water, and in case of need availed themselves of the big well just outside the town.



For scale, see Fig. 37.]

FIG. 40.—ABDA: WELL-HOUSE S.W. OF THE MONASTERY.



and another in Greek

ΔΟΜΝΑ
ΝΘΡ
ΟΘ
Λ

faintly incised on the

door-jamb of a rock-cut chamber (Fig. 41).

ΔΟΜΝΑ
ΝΘΡ
ΟΘ
Λ

FIG. 41.—ABDA: GREEK GRAFFITO.

One point of interest about the town is its system of rubbish heaps. Here there could be seen very clearly what at other sites, *e.g.*, Raheiba and Esbeita, was present, but less noticeable, namely, that certain plots of ground were definitely put aside and marked out for the depositing of rubbish. Just outside the Upper Town, to the west, were rectangular areas

surrounded by low walls, within which refuse might be shot : paths are left between the mounds, and a clear space separates them from the town wall—a sort of *pomœrium* ! The rubbish heaps were quite low, very different from those of Khalasa, and did not point to any long period of occupation.

The whole plain around the town, with most of the hill-top not occupied by buildings, has been cultivated. The country is one of limestone chips, with but little flint, and there were not to be seen here the flint heaps or ridges that elsewhere marked the sites of ancient vineyards ; but the ruins of one or two winepresses show that grapes were grown here also. About two miles out on the Rakhama road are two small square towers of good ashlar masonry, standing close to the roadside. Perhaps these are block-houses of the road patrols, not unlike those which the Turkish Government used to

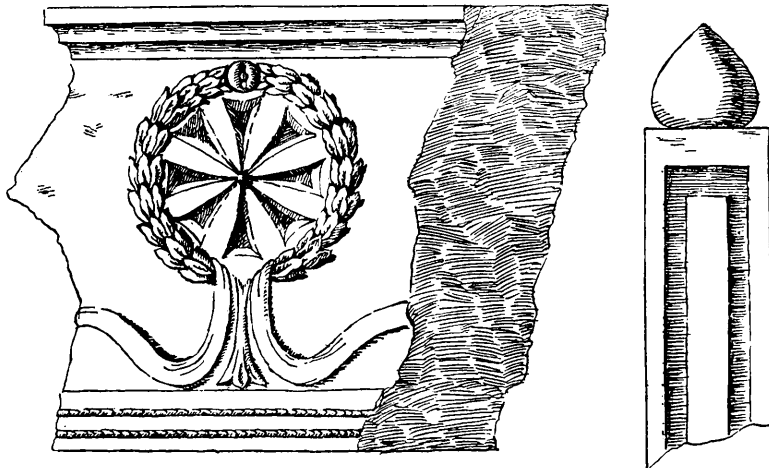


FIG. 42.—BEERSHEBA : BALUSTRADE AND POST-HEAD. 1 : 8.

maintain along the Jaffa-Gaza post-road, or that which seems to have stood at Ain Ghadian in the south, and at Nagb el Safa and Wady Figra near the Araba on the Kurnub road to Petra.

The Byzantine town of Birosabon has been so thoroughly destroyed that it calls for little comment. Not only have all the old buildings been razed to the ground, but even the cemeteries have been plundered in the search for stones to be re-used in the building of the modern town that overlies the ancient site. Many inscriptions have been found here, of which the bulk have already been published, and many have been sold and carried away ; others are built into modern houses ; a few are stored in the Government Serai. All that we found we copied and publish

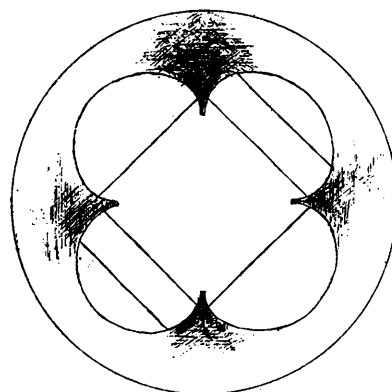
here ; but it is quite possible that some of them are already known. The ancient town was certainly a large one : its ruins can be traced over a wide area, and the cemeteries to the north-west are very extensive. The ruins of two churches could be seen, also a fragment of mosaic pavement, and heavy foundations in concrete ; broken columns and fragments of moulded cornices or carvings are common in the houses of the modern town (Figs. 42, 43); but there was nothing to be planned, nor, apart from the inscriptions, anything of interest to be noted (Plates XXVI, XXVII).

So far as surface indications go, there was no really ancient settlement upon the site. Beersheba is in the "tell" country, but here there is no tell ; no fragments of pre-Roman pottery could be found. It would seem certain that in ancient times this town was at Sheba (Tell el Seba), and that Beersheba, the Wells of Sheba, lay out in the open tilth and pasture land where nomads such as Abraham and his sons would encamp at a distance from the walled city. This distinction between the town and the watering-place seems to be clearly drawn in Joshua xix, 2 (*cf.* p. 46).

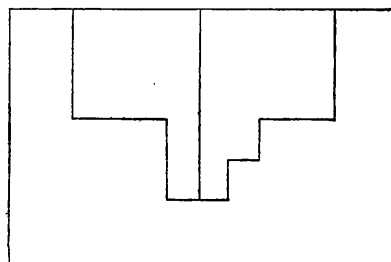
South of the barren limestone hills which fringe the Beersheba plain the country opens out into wide rolling sand-dunes, marked out even more clearly as one advances southwards by the ruins of hedges that struggle upwards through their drifting yellow shroud to mark square fields or bordered roadways.

Then a sudden drop in the ground-level brings one to the more fertile soil of the Wady Khalasa valley, a wide plain once all cultivated and still capable of cultivation at the present day if only the water-supplies were properly conserved as of old and the ground ploughed better than with the crooked stick of the feckless Beduin.

The hand of the spoiler has been almost as busy at Khalasa as at Beersheba ; stones from its ruined walls have been and are still carried off to Gaza



PLAN



SECTION.

FIG. 43.—BEERSHEBA : FONT IN WHITE LIMESTONE NEAR THE SERAI. 1 : 10.

in such quantities that "Khalasa" has become there a synonym for good-quality limestone building-blocks. We could make out the outline of the town but it was impossible to plan any of its buildings (Fig. 44).

Khalasa, the ancient Elusa, was perhaps a Nabatean foundation upon the trade route between Petra and the port of Gaza. There is no "tell," nor did we find any very early potteries, but a Nabatean inscription (p. 145) takes us back into the pre-Christian period, and the size of the vast rubbish-heaps that surround the town point to its long life. It is mentioned as a seat of pagan worship by Jerome (*Vita S. Hilarii*; *Comm. ad Jes.* 15); and it figures promi-

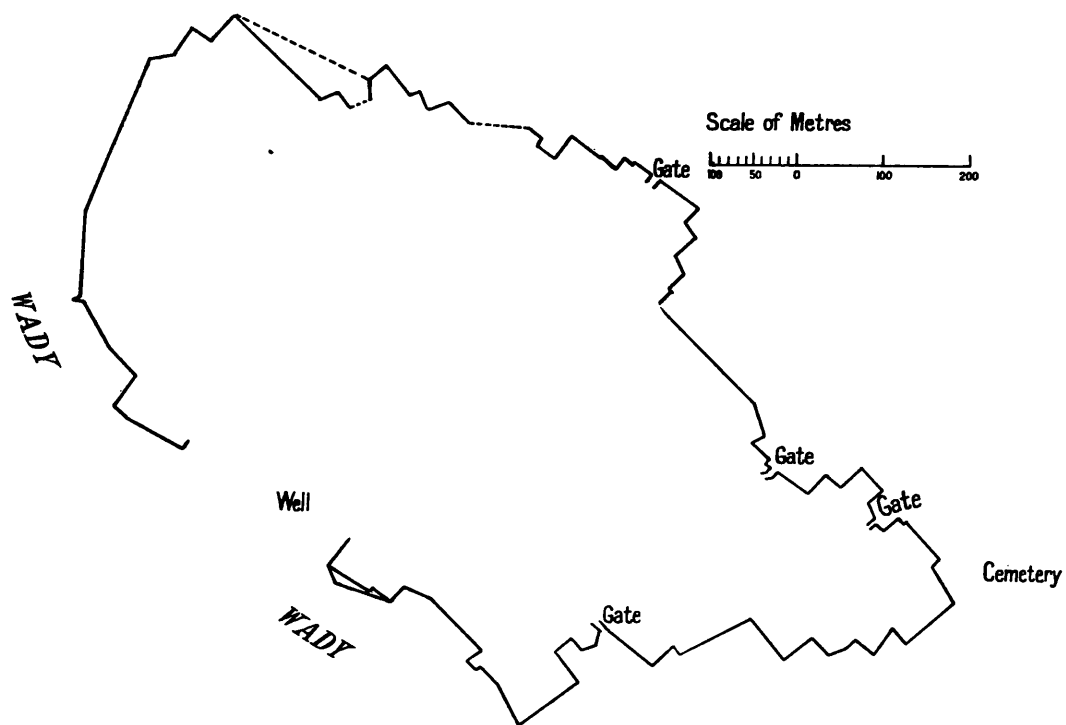


FIG. 44.—PLAN OF KHALASA.

nently upon the Madaba map and upon the Peutinger Table. It is certainly distinguished in this way from the majority of the Byzantine cities in the south, which are of far later foundation. Most of the extant ruins known seem to be late in date; the inscriptions found here, with the exception of the Nabatean example previously quoted, all belong to the late Byzantine period, and it is quite possible that a good deal of the town was rebuilt when the other cities of the south were being founded. Amongst the coins found here were several

of Constantine and Arcadius; Byzantine large brasses with M and DOMINUS I PAULUS, etc., and some early Arab copper coins.

If Khalasa is the Elusath of Theodosius (*De situ Terrae Sanctae* xxvii*), then it was a recognized station upon the Jerusalem-Sinai road about 530 A.D. The last official mention of a bishop of Elusa is in 536 A.D., after which date the Saracens are described as giving trouble in the district; but Antoninus of Placentia,† about the year 570 A.D., speaks of "Elua (or Eluahal) in capite eremi" upon the Sinai road and mentions a story of a bishop there, but contents himself with calling it a "civitas." This seems to be the last mention of it.

Probably Elusa shared the fate of the other southern cities and fell before the earlier Mohammedan invaders, perhaps a few years later than the rest

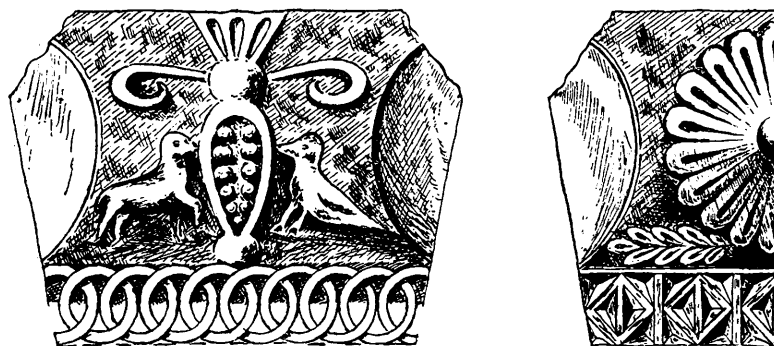


FIG. 45.—KHALASA: LIMESTONE CAPITAL FROM TOWN. (FLAT CUT IN TWO PLANES.) 1 : 9.

because it lay further to the north. Beersheba we know to have been inhabited in Arab times.

The town lay some two hundred yards back from the east bank of the wady; but from the west bank a large building with very heavy walls projects forward over the bed of the torrent; this is probably the fort of the bishopric of Gaza. For the rest the town was only defended by the continuous though irregular line of its houses and garden-walls. In a clear space south of the fort, not enclosed by the walls, is the well that still serves the needs of travellers and of the few Beduin households encamped close by on the wady bank. The water is plentiful, but brackish and unpleasant. There are traces of other wells now filled in with débris. On the south side of the town, near the south-west

* Corp. Script. Eccl. Lat., vol. 38, p. 148.

† Corp. Script. Eccl. Lat., vol. 38, p. 211.

corner, is a small gateway between two ruined towers ; from this the outline of the town runs on in a series of rectangular returns, enclosing many small open courts or gardens, and at the south-east corner a building whose simple column bases give it some title to distinction. On the east side are two gates. The road leading from the southern of these, bordered by graveyards, runs to Kurnub ; the northern gateway is more elaborately planned with its entrance set at an acute angle. Outside the walls lie great rubbish-heaps, their mound only broken by the lines of the roads, and in the north-east the mound reaches such a height as quite to dominate the town. The north part of the site is much ruined ; here was the gateway through which the road ran north to Beersheba, and, by a fork just beyond the gates, north-west to Gaza : the broad tracks, bordered by hedges, can be traced for a considerable distance across the plain. A small fort, nearly isolated, and connected with the town only by a long double wall, rose from the wady bank at the north-west corner of the site, separated by large gardens or pasture grounds from the bishop's fort to the south of it. There were few buildings across the wady, but over the high land there the roads to Saadi and Raheiba were clearly defined by their overgrown hedges and piled sand-drifts. Along the south of the Saadi road lies a large cemetery from which we secured several inscriptions (*see* p. 138) ; here too were the ruins of what appeared to be a small funerary chapel decorated with four columns having carved capitals.

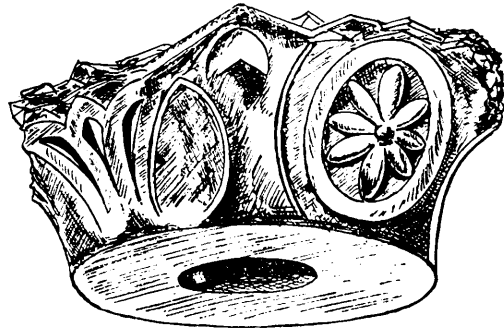


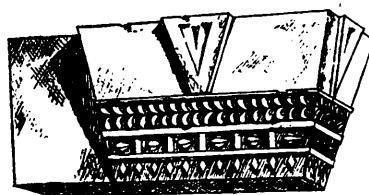
FIG. 46.—KHALASA : MARBLE CAPITAL FROM TOWN. 1 : 9.

About $1\frac{1}{4}$ mile south-west of the town were the ruins of a fair-sized village of late Byzantine date, and a stopped-up well, lying on the east bank of the wady ; remains of smaller hamlets or isolated farms cap most of the hillocks bordering the plain. It is clear that most of the once extensive agriculture of the neighbourhood must have been in the hands of this rural population, and the bulk of the townsfolk of Khalasa must have been engaged therefore in some form of trade—a trade of considerable importance, seeing that the area of Khalasa is ample for a population of twenty thousand souls. It is perhaps worth suggesting that as the town lies at the branch of the great Akaba trade-

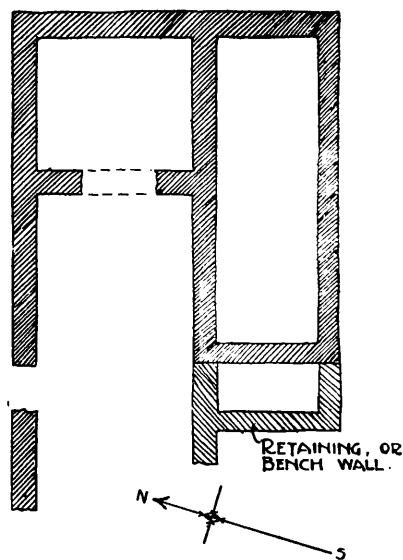
route along which, in the Byzantine period, caravans bringing silk from the Ceylon depôts passed to the Mediterranean harbours and through Central Palestine to the wealthy cities of North Syria, the trade of Khalasa may have been the unravelling of Chinese and Indian fabrics, after which process the silk threads were re-woven with linen to form the ἡμισηρικόν of European commerce.

From Khalasa a road nearly fifty feet wide, bordered by hedges, ran westward across the high plateau, climbed a sandy ridge, and then dropping to another wide plain dotted with low hills and ridges, wound between these to Saadi. Nowadays the hedges have spread untended, until the road has degenerated to a series of camel-tracks threading lengthways a broad belt of thorny scrub. Beyond the sand dunes, on the other hand, such modern cultivation as there is has destroyed hedges and tracks alike, and only here and there are vestiges of the old roadway. Then, three or four miles out from Khalasa, the road becomes clear again, passing beneath the ruined garden walls of some country villas lying at the foot of a long, low ridge of limestone to the right of the highway. Further along still the road is bordered, not by garden walls, but by a single line of small stone booths—doubtless such shops as line the main street of modern Bir el Seba—and so one reaches the ruins of the little town. Saadi was unwalled, its houses scattered over two or three low limestone knolls, all variants of the standard courtyard type (again like the modern houses of Bir el Seba), many standing in fair-sized gardens; a pleasant suburb of the more crowded business town of Khalasa.

SAADI.



(1 : 9.)



(1 : 200.)

FIG. 47.—SAADI: BUILDING AT S. END OF TOWN, AND CAPITAL FOUND IN IT.

The most prominent ruin was that of an oblong building set on a small knoll in the thickest part of the village, and in part supported by terrace walls; it boasted stone columns, but the plan, so far as it could

be distinguished, was not that of a church. Immediately behind it was a well, recently cleared out, having stored water at a depth of $6\frac{1}{2}$ metres : on the well-head were hammered tribe marks ∇ . Two large cisterns, one cleared out and containing water, which came to it from a catchment round the hillside, lay further to the south. In a building close by the cistern was found the well-carved capital of a door impost (Fig. 47), and in another ruin beyond this was a stone having a simple piece of leaf ornament and a rough capital with chip-carved decoration (Fig. 48). No other stone carvings or inscriptions were seen, nor were there any traces of pre-Byzantine settlement. So far as could be seen, the little village did not possess any church, or any building more important than the house of some landed "effendi." It seems to be simply the most favourable example of those agricultural hamlets which are found in the neighbourhood of Khalasa, and must have supplied the foodstuffs of the city workers ; its position here is explained by the wide plain of tolerable soil that surrounds it.

Not far away, across country, is another hamlet called Saadi el Raheiba : it lies on a hill-top looking over the Raheiba valley where this is joined by a tributary wady from the south-east. Most of its houses were miserable rubble-built affairs, now fallen into hopeless ruin ; but two small square ashlar towers still stand some twelve feet high, too full of débris for their character to be fixed. They may be watch-towers, under whose shelter poor people built their huts, and their position commanding the great valley road, immediately over against the far earlier watch-tower of Kasr el Raheiba, lends colour to this view, but there is no internal evidence forthcoming to support it.

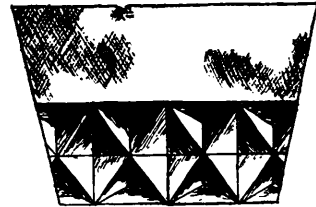


FIG. 48.—SAADI : CAPITAL.
1 : 8.

The road from Khalasa runs for a short distance parallel with the Saadi road, a little to the north of it. Then winding round a hillock, where is the ruin of what might be a blockhouse, it descends a small pleasant wady between bare flint-strewn hills,* to work out between sand-hills into the broad Raheiba valley. This is a wide, shallow depression, between steeply shelving banks of bare limestone, weathered into terraces and footed by heaps of scree ; the soil is good, and

* From one of these, Umm Athri, a number of specimens were collected to illustrate the peculiar natural fractures of these flints.

even now nearly the whole area is cultivated by the Beduins. The great inland road to Egypt runs down the valley ; on the far side, on a spur jutting out from the wall of hills called Tell el Kasr el Raheiba, are the barely distinguishable ruins of a little fort that in the second millennium B.C. guarded the trade route (*see* p. 40). Further up the valley a side wady coming in from the west leads to Raheiba. One passes first the ruins of a small village lying in the wady amongst its terraced fields ; then the path climbs up to

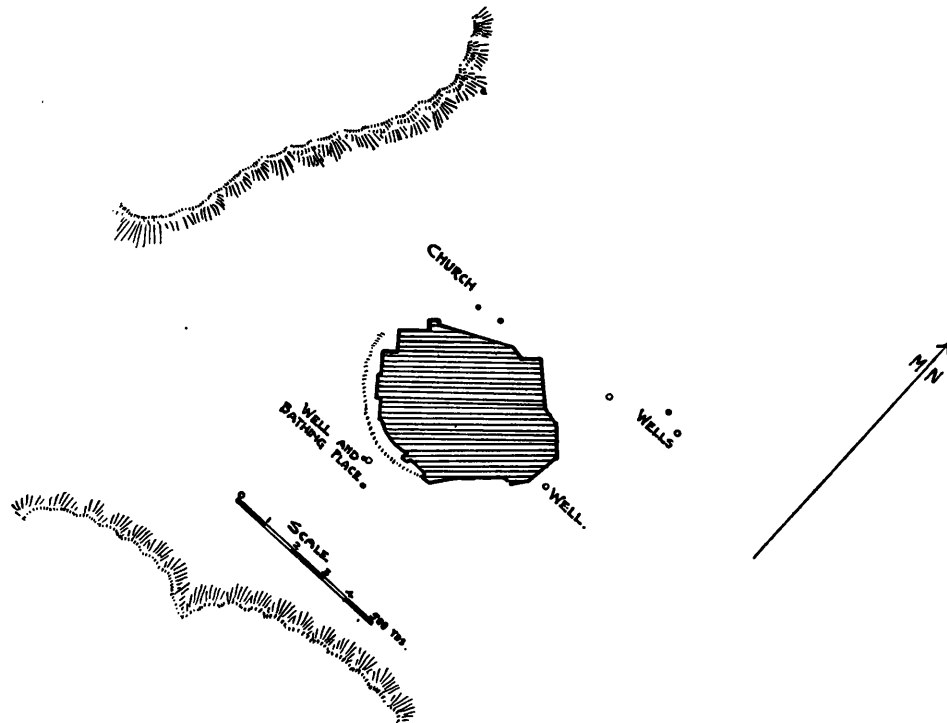


FIG. 49.—PLAN OF RAHEIBA (by G. Rimmer).

the plateau, where we found a crowd of Beduins watering their goats and camels at a series of ancient cisterns which have recently been cleared out and now store throughout the year a tolerable supply of water. On the high land beyond these could be seen the ruins of Raheiba proper. The town was a large one,* irregular in shape, and defended, as is usually the case, only by its continuous house and garden walls : its extreme length was 600 yards by 400 yards (Fig. 49). The ruins are still, as when Palmer saw them, a very

* Mr. Huntington's note in *Palestine and its Transformations*, p. 121, under-estimates the size of these ruins, so much so that we are inclined to suppose that he saw only those of the lower village.

abomination of desolation, the whole slope of the hill covered with tumbled stones and crumbling walls, through which it is difficult to pick a precarious way. Rubbish chokes the innumerable cisterns; the courtyards are a tangle of briars; here and there the trunk of a tower, or the cracked curve of an apse, stand out above the rest, but the rain has washed out the poor mortar from their masonry, and an incautious movement will send what was yet a wall down in an avalanche of loose stones upon the formless heap below. Our photograph on Plate XXVIII, 1, serves to give some idea of this, the most lamentable ruin of all these ruined towns. It was impossible to plan the place. In the middle of the town could be seen the remains of a large church with an apsidal end, solidly-built walls, and numerous columns and column bases: two fragments of stone carvings (Fig. 50) belonged to this. Round it were buildings that might well have been those of a monastery. Next to the church was a *khan* of quite modern type, its great open courtyard with a well in one corner surrounded by a two-storeyed range of vaulted rooms. The town itself seems to have been well laid out with narrow streets at right angles to one another, and occasionally a little public square; the houses are small, and usually crowded very closely together. On the south side, where the hill falls sharply away to the main wady, the line of house walls, supported at their base by a revetment of cut stone, made an accidental, but effective, line of defence for the town; a great gateway breaks this

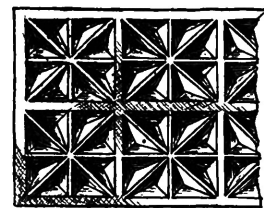
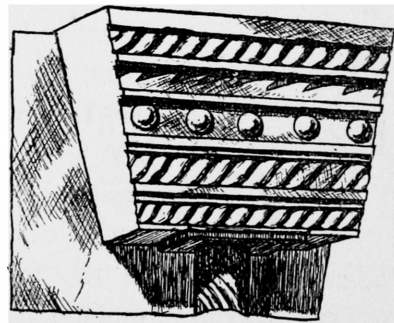


FIG. 50.—RAHEIBA: ARCHITECTURAL CARVINGS. 1 : 8.

line in its centre, and the road through it led downhill to the well and the bath-house. Close to the gate is a great reservoir, cut in the rock and lined in part with rubble masonry set in good cement, resembling the reservoirs of Esbeita; it is of irregular shape, measuring some 22·50 metres by 18·50, and is $4\frac{1}{2}$ metres deep; in one corner a stone staircase leads down into it (Plate XXVIII, 2). Half-way down the hill-side is a line of stones—a wall only one course high—which seems to have marked out the area beyond which rubbish had to be thrown (*cf.* Abda, p. 106); the further slope is covered with town refuse. By the path that runs

down from the south gate are some rock-cut tombs of ordinary type with recesses full of loose bones ; two similar tombs are now used as goat shelters.

On the plain to the west of the town is a large isolated church, much ruined, but apparently of the usual plan, with three aisles ending in apses at the east end. It was too much encumbered with débris to be planned. The screen-wall could be distinguished, however, and the forecourt seems to have had a range of chambers along its north side, while two chambers—perhaps towers—flanked the great western doorway. No inscriptions or carved work could be seen.

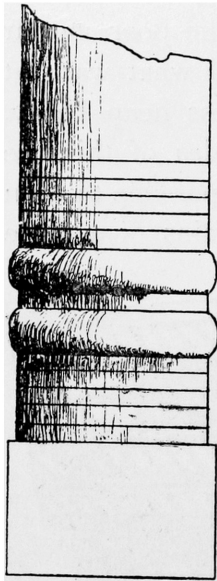


FIG. 51.—RAHEIBA :
ONE OF THREE
COLUMNS. 1 : 14.

A large cemetery lay beyond this church to the north-west, and another on the north side of the town. In the latter we found some funerary inscriptions badly cut and much weathered (p. 143, Nos. 28–33) which presented few features of interest, and the ruins of a small funerary chapel like that of Khalasa, whence come the columns and capitals shown in Fig. 51. In the main wady to the south of the town was a large and well-preserved bath-house much like that of Abda (*q.v.* p. 105). The walls were of well-cut stone, the barrel roofs and the central dome of a sort of concrete made of small stones and lime of

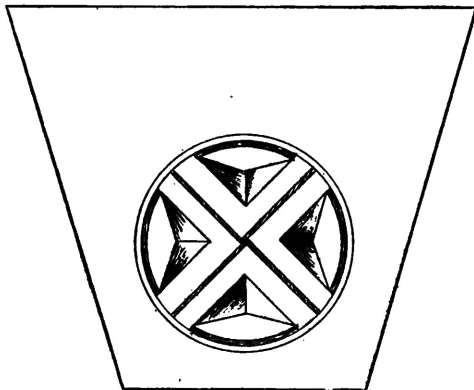


FIG. 51.—RAHEIBA : ONE OF
FOUR CAPITALS.

rather poor quality ; the hot-air channels up the walls showed at once the nature of the building.* Just by the baths was a well, the most remarkable in the Negeb, in that the water occurs at a depth of over 300 feet. The débris that filled it was cleared out only three years ago by native labour, and now that it is open the Beduins have no ropes long enough to make it useful. The well is stone-lined and seems to widen out bell-like at the bottom, where

it is rock-cut : the stones at the top are deeply scored by ropes.

A short distance away is another large isolated building the character of

* Plans, sections, elevations and photographs in Musil, *Edom*, 75–82.

which we could not determine: the west wall stands on a revetted podium, and the buildings seem to have been connected with the well by a wall supporting a cemented stone trough, while another (filled-up) well or cistern some 50 metres away seems also to have been connected with it.

Apart from the well, for whose date there is no evidence at all, though its upper stones do not look very early, all the remains visible above ground are definitely Byzantine. From the nature of the ground it is improbable that the existing ruins cover any early settlement, and certainly there was here no early fixed settlement of any importance. The identification, therefore, of Raheiba with the Rehoboth where Isaac dug a well is a theory not yet supported by archæological evidence.

El Auja, when visited by Palmer, was still a comparatively imposing ruin, and even in 1909 Mr. Huntington* saw two parallel streets, 600 feet long or more, with the masonry bases of their colonnades still visible. But now the ruins are only less melancholy than those of Khalasa. An attempt has been made to establish there the seat of a Kaimmakamlik, and the ancient site has been ruthlessly plundered to provide material for the new buildings which an altered government has failed to complete. At the base of the old acropolis stand three stone houses, tile-roofed and untidily pretentious, whose upper storeys are government offices and their ground floors starveling shops; a corrugated iron roof covers the low walls of a monastery-church that was destined to be a guest-house; on the hill-top the gaunt walls of the serai, standing window high, rise from a wilderness of stone heaps and broken tiles, more desolate than the ruins out of which they are built.

Curiously enough the same considerations that prompted this abortive scheme of Abdul Hamid were responsible for the building of the original Byzantine town. The Sultan saw here the strategic position for a government and military post that should guarantee his great forward movement against the Beduins of the desert. The Byzantine emperor fixed upon the spot for one fort in the chain that was to safeguard his territory against the roving enemies in the south who were so soon to swarm over his borders. El Auja lies indeed off the main trade-route, but trade was no longer the chief consideration; the fort is well placed to block the great Wady Hafir, which leads up from the central plateau of the Tih, and its garrison would command

* *Palestine and its Transformations*, pp. 121 seq.

not inadequately the old Shur road that runs past Bir Birein. The wide valley would supply the soldiers with food, and water was to be found at no

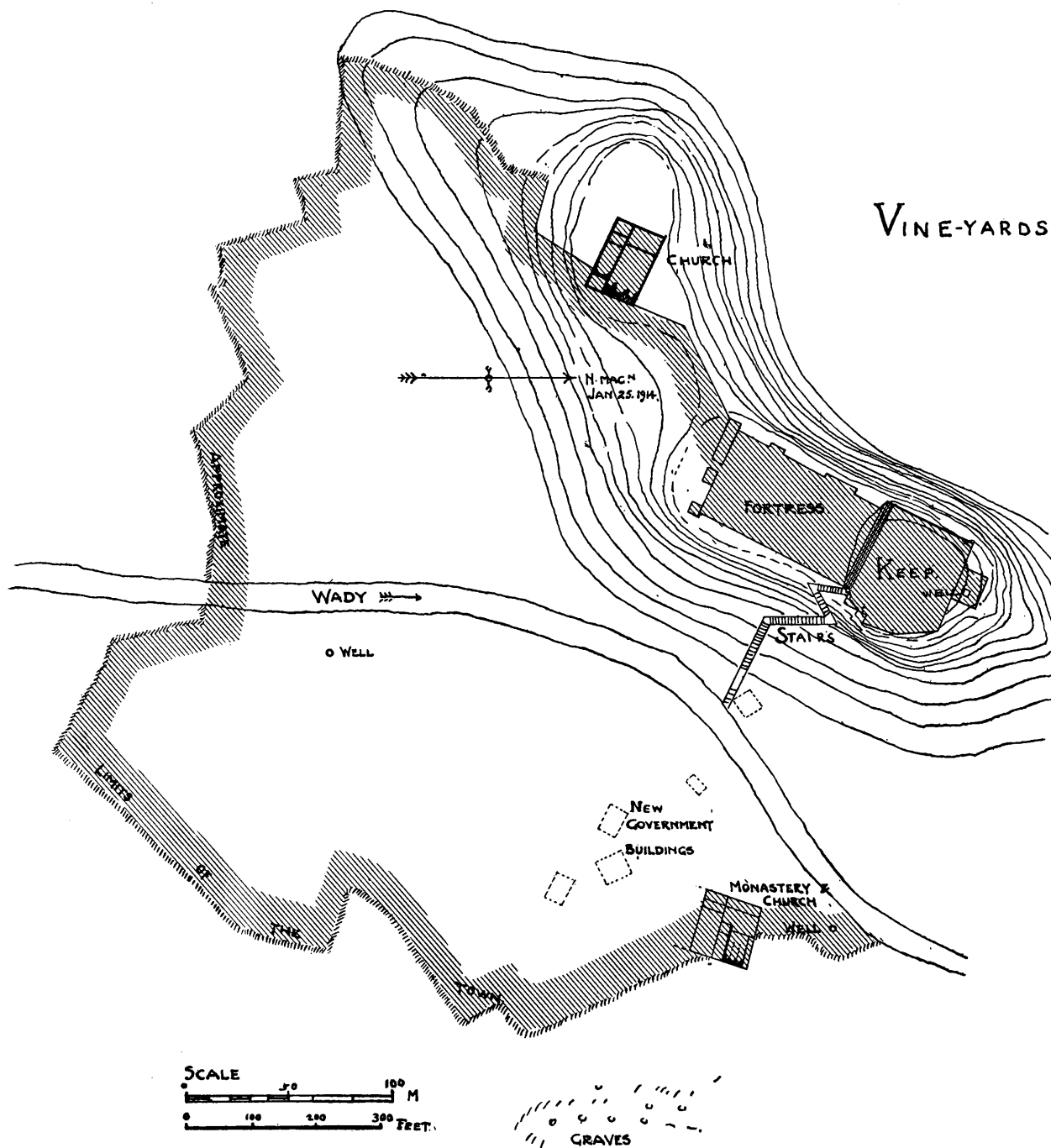


FIG. 52.—PLAN OF ANCIENT TOWN AT EL AUJA.

great depth. Actually fortresses are of little avail against a mobile enemy in a desert country where roads run everywhither ; and the event proved their worthlessness here ; but on paper El Auja, Abda and Kurnub may well have looked an admirable chain of defence, and if to us they seem to have rounded off a theory rather than to have met a local need, we can only suppose that that theory of imperial defence was drawn up at Constantinople and not on the marches.

The town (Fig. 52), though covering a fair area, does not seem to have been very large, for the houses were scattered and open spaces frequent. It lay on both sides of a wady, clustering under the precipitously-scarped sides of its rocky citadel (Plate XXIX, 1). The summit of this hill was occupied by a strong fortress whose heavy walls of ashlar masonry rose directly from the steep slopes or from the sheer face of the rock. The fort seems to have been composed of two parts, a lower oblong enclosure with an arched gateway at its south end defended by flanking towers, and a separate master-tower on the higher level at the north end of the hill, to which access was obtained both from the lower enclosure and directly from the town by a great flight of rock-hewn steps which zigzagged up the hill-side. The lower area is now occupied by the ruins of the unfinished serai. Only parts of its walls and of the gate tower remain, but we may suppose, on analogy with Abda, that it was an open space, the bailey of the fort ; while the northern part, which is separated from it by a revetted slope and is full of cross-walls and substructures, would have answered to the keep. At the very point of the rock the walls are thrown forward to enclose a small platform in which is cut a great square well, 12 feet each way and still over 70 feet deep, lined with good ashlar masonry.

The fine church which Palmer illustrated (Fig. 53) stands on the same hill-top, farther to the south-west, joined by a curtain-wall to the south-west angle of the fort. It has been sadly ruined by the 'Turkish builders ; the facing-blocks have been pulled away and only the rubble cores of the walls are left ; only the east end is standing, and even here the main apse has been utterly destroyed. The plan, whose measurements could be but approximately taken, shows a large church of the usual type, having three aisles, a side chapel on the south, and a small tower (apparently) over the chamber in the south-west corner. The architecture is the same as that of Esbeita ; but here the flinty limestone blocks of the lower courses were more

neatly squared, and in the church proper the inner face of the walls had been of smoothly-cut ashlar instead of plastered rubble. The "atrium" was large,

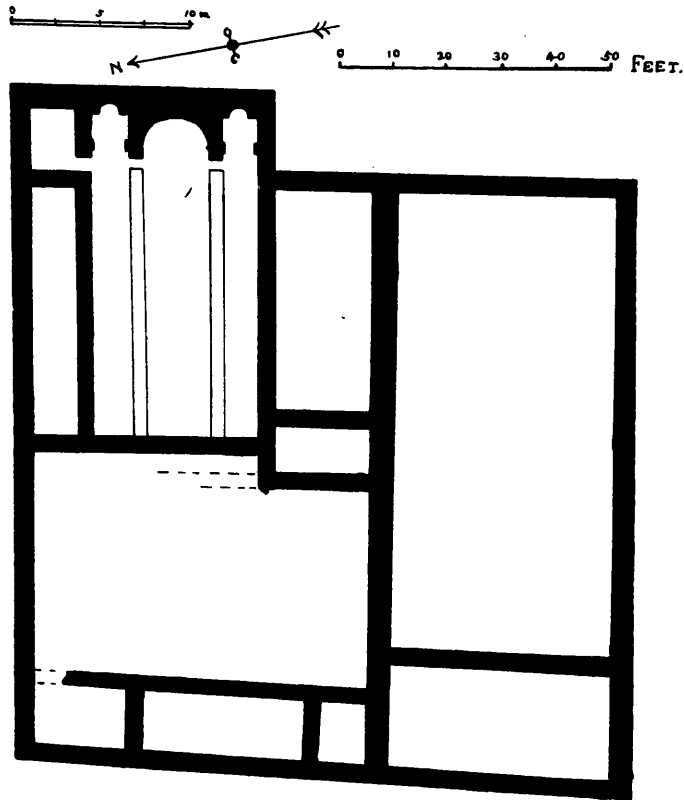


FIG. 53.—EL AUJA : MONASTERY CHURCH.

having the main door on its north side, and a bench along part of its west wall ; from this wall also, towards the north end, projected a small wall whose purpose was not clear. On the north apse were traces of fresco painting. There were column-drums lying about, but the intercolumniation could not be determined ; there were a few pieces of mouldings, but these too fragmentary to be of interest. There had been a doorway, leading to the town, in the continuation of the west wall that ran out from the church corner to join the curtain-wall. The outer

walls of the church, as of the fort, were set in good lime mortar (Plate XXIX, 2).

Below the acropolis, on the east bank of the wady, lay a small church with

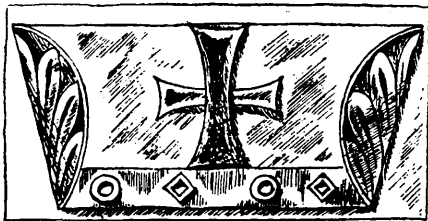


FIG. 54.—EL AUJA : CAPITAL. 1 : 8.

monastic buildings attached. The church itself had been partly cleared, and the first steps had been taken to turn it into a rest-house : its walls stood some 6 or 7 feet high. The monastery had not been excavated, and only a few of its walls could be traced. The columns were ringed with flat bands in relief (*cf.* the south

church of Esbeita) ; a fairly good piece of leaf-carving in marble was built into one of the modern walls, and a limestone capital (Fig. 54), in the

courtyard of the mudir's quarters, probably came from here. This is the church in which Mr. Huntington* saw a mosaic pavement with an inscription bearing the date 435 A.D. (496 of the Gazan ? era).

From the town itself we could get nothing of interest ; so plundered is it that many of its walls can only be followed by the long trenches made by searchers after stone. There are four deep wells still visible, of which one has been cleared and gives good water.

Only one inscription was found here, but others have been reported by other travellers, *e.g.*, Huntington (*loc. cit.*), and give dates ranging between 436 and 519 of the local era (375-458 A.D.). South-east of the town lies a cemetery, freely plundered, and beyond this are walled and irrigated fields. On the slopes north and west of the town were vineyards : eastwards the great plain, now sparsely scattered with thornbushes, shows signs of ancient cultivation, and southwards the whole Wady Hafir is crossed and recrossed by terraces and hedges. By Tell el Seram, where a side wady narrows down to a hollow bed of good soil about a hundred yards across, bordered by gravel banks along which run dry-stone walls, the valley is crossed every fifty yards by double lines of low walling, some seven feet apart, wherein were set hedges whose shade would conserve the moisture in the narrow earth-plots, while these screens would shelter from the wind some more than usually delicate crop. The wide extent of the cultivated area, contrasting with the presumably none too large population of the town, is explained by the precariousness of the harvest in these ill-watered deserts, where a good crop must needs be stored against the inevitable lean years. At the present time the rainfall here is far less than at Bir el Seba, less even than at Khalasa, and if modern conditions held good in the Byzantine period, a proportionately wider cultivation would have been necessary to support El Auja than was required at those places. We have recorded elsewhere that in the southern reaches of the Wady Hafir, where the arable soil is almost equally extensive, there is no sign of permanent settlement at all, and the cultivation must have been then, as now, in the hands of nomads who reaped what harvest they could in a good year, and, when bad seasons followed each other too often, could return to the better-watered plains of the north.

The ruins of Tell Kurnub have been identified by various writers with Thamara, a station marked on the Tabula Peutingeriana at a distance of

* *op. cit.*, p. 123.

fifty-three Roman miles from Jerusalem upon the Petra road. Eusebius and Jerome describe it as on the road from Hebron to Aila, at a day's journey south from Malatha (Malis in Eusebius), which TELL KURNUB, again has been by some identified with Tell Milah. The *Notitiae Dignitatum** describes Thamara as the garrison of Cohors IV Palaestinorum; Eusebius and Jerome call it a fortified city with a Roman garrison. The identification is not at all improbable.

A large and fairly level plain stretches east by west, bounded along the north by low hills, through which runs the road to Beersheba. To the east the view is open, and beyond the gently declining foreground one looks across the hidden gorge of the Araba to the mountains of Kerak, blue in the far distance.

Westward, low hills again shut off the valley from the open rolling uplands of Um Deifi. Only along the south are the hills really lofty—a long, flat-topped ridge, not precipitous indeed, but too steep for any but a footman to cross, and for him not too easy a clamber. The Wady Kurnub or Wady el Sidd, a broad, sandy torrent-bed, sweeps round under the foot of the ridge, which rises like a gigantic earth rampart from its bank (Plate XXX, 1). Almost in the middle of its line there is a break in the hills, and the wady, dropping rapidly, turns sharply to the south, and breaks through a winding gorge, whose rocky sides, rising sheer and inaccessible, form one of the finest pieces of cliff scenery in the south country. But from the plain this gorge is hardly suspected, for right in the middle of the rift there rises from the plain a small isolated knoll that from the north completely masks it. The wady, plunging downwards over rocky ledges, cuts it off from the south-western hills; a second and smaller tributary stream, with like precipitous banks, divides it from the south-eastern range; the hill, which sloped up fairly gently from the level plain, breaks down in great cliffs that overhang the confluence of the two torrent-beds and commands completely the passage down their gorge. On this knoll stands the fortress of Kurnub.

The Beersheba road (from which a branch track runs west to Khalasa) skirts the western foot of the castle hill, then, passing down rock-cut stairs between a smaller hill to the west and the river gorge, reaches the great dam, and running over this, climbs the rocks on the opposite bank, and creeps precariously along the face of the precipice above the ravine. The road is a

* Ed. Böcking, pp. 358–359.

bad one—worse, perhaps, now than when it was kept in repair—and another easier road from Kurnub runs half a mile eastward, and rounding the end of the long hill-wall, strikes south to meet the ravine road. So by Nagb el Safa (Plate XXXII), and across Wady Figra, one comes to Ain Weiba (where the Darb el Sultan from Khalasa viâ Nagb el Gharib and Wady Mura joins the Kurnub route) and thence across the Araba to Petra. But bad as it is, and was, the road was a direct one, and must have been of no small importance, especially if the Byzantine post passed this way to go down the Araba to Aila and the Red Sea. In view of this fact the military significance of Kurnub is unmistakable; the fortress was built to command the road, and of such road-forts it is the most elaborate example that we have.

The town (Fig. 55), which occupied the top and the gentle northern slope of the hill, was surrounded by a rubble wall some 3 metres high, strengthened at its angles by small towers 3 or 4 metres square, and of only one storey. Two gates open on to the low ground to the north, and on to the western slope. The wall itself, as also at Abda and other towns, is a poor affair, an obstacle rather than a real wall of defence, intended rather to resist mounted raiders than an ordered assault. The buildings occupy only part of the enclosure; conspicuous are two churches and two other large and well-built structures which probably were in the nature of Government offices, and a tower, still standing to a considerable height, which from the middle of the slope dominates the road to the ravine. These larger buildings occupy nearly a quarter of the inhabited town area; for the rest the houses are small and poorly built, nearly all of one storey only, not a few seeming to have had foundations only of stone and a superstructure in some flimsier material. Probably these are the quarters of the common soldiers of the garrison (Plate XXXI, 1).

The strategic importance of Kurnub is emphasized by the system of blockhouses that secure its command over the ravine road. On the eastern spur of the town hill is one of these, a small ashlar tower, built close to the ruins of an older structure, perhaps of the same type, overlooking the eastern wady. On the western edge of the hill is another tower perched immediately above the angle of the main wady. Two more towers, and the ruins of an older but similar building, stand on the smaller hill to the west, above the great dam, commanding the road as it skirts the hill to cross the torrent bed. A larger building, also a small fort, judging from the thickness of its walls and their pronounced batter, stands on a small rise out in the plain by the road,

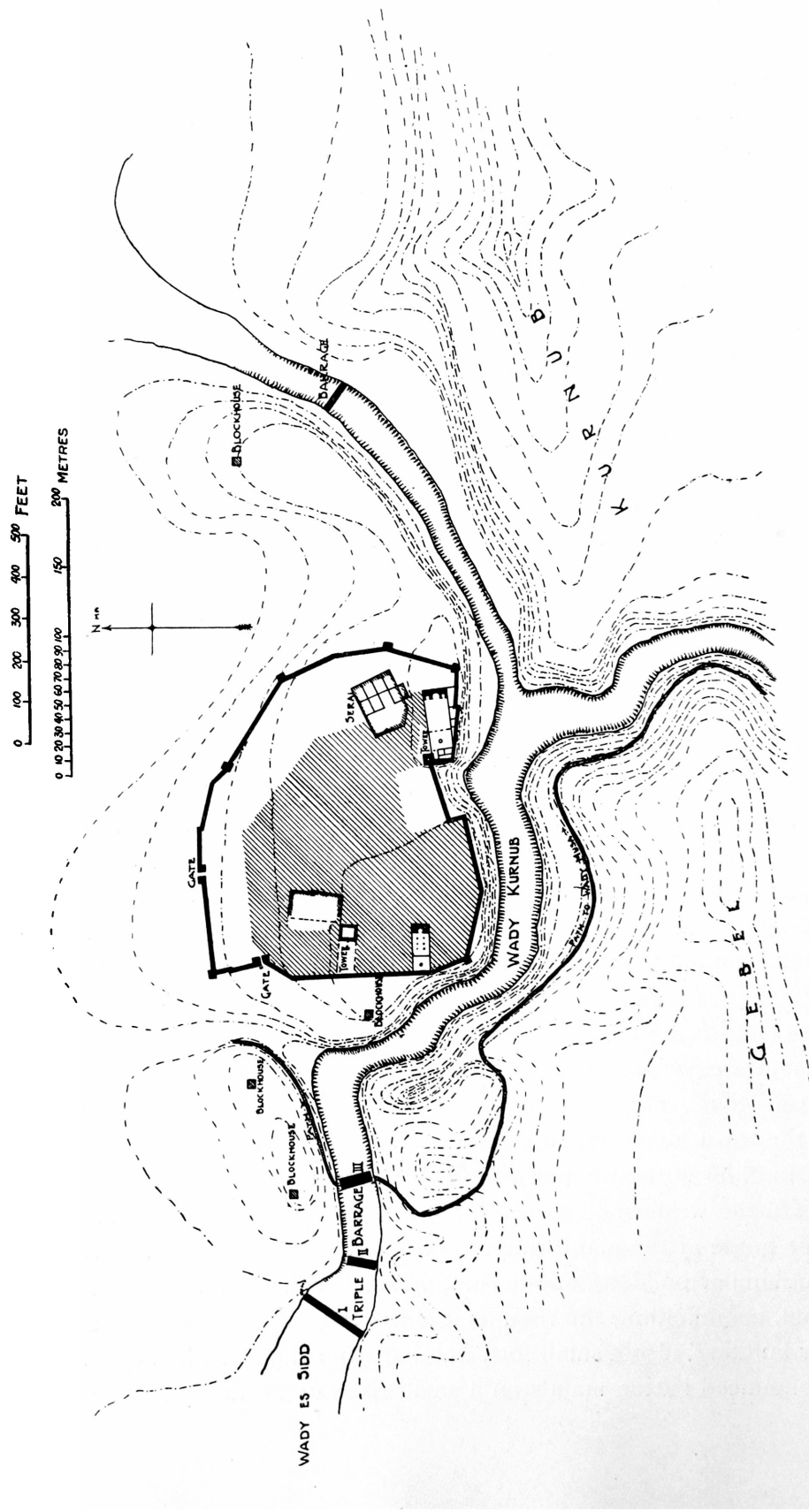


FIG. 55.—TOWN AND DISTRICT OF KURNUB.

just where this dips down to pass between the town and the western hillock ; and further out in the plain, still close to the road line, is a sixth of these small square buildings which, though not in itself distinctive, must, by analogy with the rest, be regarded as a military blockhouse. These six towers, dependent upon the main fort, occupying the posts of vantage that best command the south road and the gorge, give to the place a character quite different from that of any other of these southern cities.

Another remarkable feature of the place is the great work by which the flood waters of the wady were kept in check. One is used to the more or less elaborate terrace walls that cross nearly every valley and torrent bed ; generally these are low, roughly piled rubble walls, or more rarely, as in Wady Ramliya, well-built walls of a man's height, with faces of coursed rubble or rudely dressed square stones. Here is something different. It has been remarked that the stream-bed drops sharply down from its level in the open plain to the rocky bottom of the ravine between the hills, so steeply indeed that, unhindered, a few floods in succession might well carry away all the arable soil of the valley. To prevent this, between the western hillock crowned by the two blockhouses and the rocky side of the southern hill, in a space of a hundred metres, three great dams have been thrown across the wady. The two upper dams, serving their purpose, are buried in the soil that they have retained ; the floods have deposited their water-borne soil in three shallow steps level with the wall-tops, and then, plunging over the lowest barrier, have scoured the gorge itself down to the naked rock ; from this rock bottom the face of the great dam rises exposed and intact (Plate XXX, 2). This lowest dam is 24 metres long, and 11 metres high ; its front is strongly battered, but even so, the width at the top is 7·80 metres. The face is of finely-cut ashlar stone, set in hard lime, packed behind with lime and boulders ; the top, over which crossed the road, was paved with layer upon layer of flints set in lime, a concrete as hard as the rock itself. A few stones have been dislodged from its edge, and the masonry of the front is deeply channelled by the falling water, but the dam is still almost as solid as when it was built. Fifty-one metres up stream is the second dam, 20 metres long, and, at the top, 5 metres across, buried in the silt ; it is similarly built with a sloped face of fine ashlar, and filling of boulders and cement. The third dam is 35 metres up stream ; it is 53 metres long and 3·40 metres wide at the top ; the front seems to have been vertical, not battered, and the height was probably not very great.

In the eastern wady, below the blockhouse, is another, but smaller dam, built of cement and stone on a natural ledge, the first breakdown of the torrent

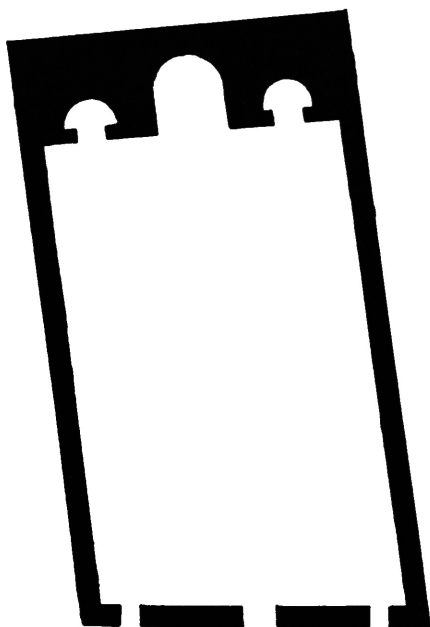


FIG. 56.—KURNUB: EAST CHURCH.
1 : 400.

bed. It is 3 metres high, and some 20 metres long, but has not the solid strength of the great dam to the west—naturally not, since there would be here no such volume of water as in the main wady.

In the bed of the ravine there are numerous *themail*, or water-holes, which keep their supply all the year round, and there is a spring high up behind the spur of the hills on the south-west of the ravine. Tales are told of a walled-up spring or cistern with wooden barriers and a wooden trough, but no living Arabs claim to have seen it.

No inscriptions were found at Kurnub. The eastern church was large (Fig. 56), very simple in style, of the usual type with fore-court or atrium containing a large cistern, some chambers, probably for the resident clergy, and a campanile at the north-west corner. By it was a large open square. The western church was small (Fig. 57), but comparatively rich in decoration, its stone carving being better in quality than existed, perhaps,

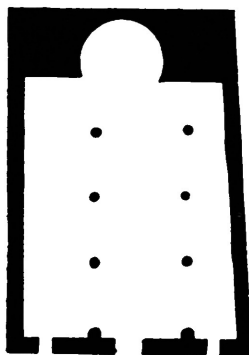
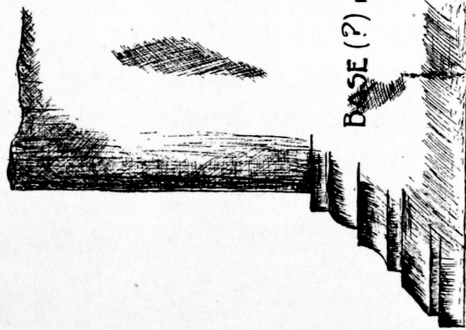


FIG. 57.—KURNUB:
WEST CHURCH.
1 : 400.

upon any other site (Fig. 58 and Plate XXXI, 2). There was only one apse, the side aisles being straight-ended; three columns and a pilaster on either side of the central aisle formed the colonnade. These columns had moulded bases and richly carved capitals, and the arch of the apse was also delicately worked (Plate XXXI, 2). Round the church are buildings apparently attached to it, and perhaps monastic in character, but now too ruinous to be distinctive.

There are traces on the site of two periods of occupation. Foundations of earlier blockhouses can be seen on the hills; in the town a number of walls have been razed level with the ground at a time when the place was still inhabited, and the eastern part of the great block of buildings dubbed "the

DOOR FRAME (?) IN W. CHURCH



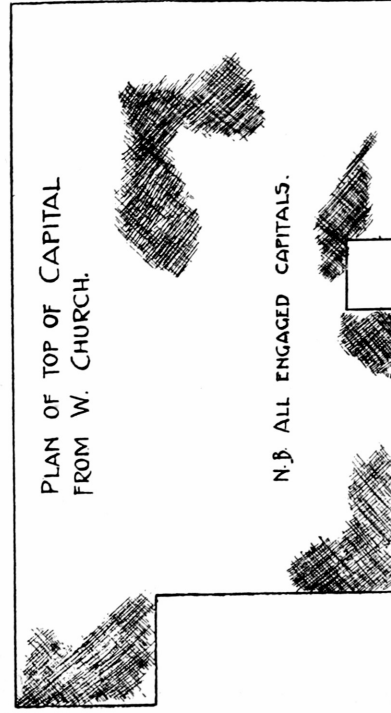
BASE (?) IN SAME CHURCH.



VOUSSOIR FROM
CHANCEL ARCH
of W CHURCH.



BASE IN
SAME CHURCH



PLAN OF TOP OF CAPITAL
FROM W. CHURCH.

N.B. ALL ENGAGED CAPITALS.

FIG. 58.—KURNUB : WEST CHURCH, ARCHITECTURAL MEMBERS. 1 : 8.

Serai" is built of larger stones than usual, and these of a hard white limestone, unlike the soft yellow material generally employed. Unfortunately, no potsherds or other remains could be found that would serve as criteria for comparative dating. We can only say that whereas the present town is probably of Justinian's time, there was an earlier settlement upon the site, though nothing is known about its period or its importance.

Modern Akaba is a village of about a thousand people, and is built mostly of mud brick, or of pebbles from the beach set in mud. The only dressed stone is in the old fort, which is a rectangle with gate-towers and round towers at the corners, built in stripes of pink and white, apparently late fifteenth or sixteenth century. It is now partially ruined, but still acts as military headquarters, and has troops living in it. In front of the houses of the village and the fort is a narrow strip of land, hedged and banked round, and full of palm trees; the outermost trees stand on the very beach, here, fortunately, almost without tide. The site of the present village has no signs of previous occupation; there are no old stones, and no pottery is to be found. Quite possibly the ancient towns around the bay were also made of mud brick. If modern Akaba were destroyed it would leave no trace after fifty years, thanks to the soluble nature of its materials. If ancient Aila had been all stone built, some of its blocks would have been re-used.

At the same time it is quite probable that the present site of the town has never been occupied before. It lies at the foot of the slopes of the Arabian hills, and wady after wady descends from them, each pointing direct upon the town; a flood from any one of these would sweep away every building in the place if it were not for a huge bank, which is (after the fort) the most striking thing in Akaba to-day. It is a great wall of earth and gravel, running along parallel with the sea behind the town, the fort, and the palm gardens, and usually from 100 to 200 yards inland. To the sea the earthwork presents a face from 10 to 30 feet high, and very steep; to the hills its top is not more than from 3 to 10 feet above the level of the ground. It is thus apparent that the effect of this earthwork has been to bank up the soil behind it (with the aid of the floods) to a very great height, and it is also sufficiently strong to deflect the water coming down from the hills either to south or to north—in any case, away from the town. The materials of the bank are very clean; what little pottery appears in its strata is Arab; and local tradition has it that it is an earthwork for cannon of the time of Ibrahim

Pasha of Egypt. If this tradition (not unreasonable) is true, then the earth-work, by shielding the site of the present town, has made it habitable and free from the devastation of floods. But the wall is just as likely to be much older, and to have been put up simply as a defence against these floods, before cannon were thought of.

In the houses of the present village there are two antiquities on view. One is the capital of an engaged column of the usual Byzantine shape, bearing on it a running ornament of an uncertain leaf. The cutting is rude, but the drawing not contemptible. The other is a similar capital, having on each of the two worked sides a half-length figure of a saint. The cutting and drawing of these are utterly conventional; the saints are alike, even in the mutilations that their faces have since suffered, so that it is fortunate that each bears his name in Greek cut into the edge of the capital above him; one is St. George and the other St. Isidore. At their bravest they were only very poor things. It is certainly the capital of a doorway or of a chancel-arch, and as certainly must have come from one of the Byzantine churches of Aila. Both stones were found, with the remains of the walls of a small building, in some palm gardens at the north-east corner of the beach. Just to the west of this spot is the ruin-mound pointed out to-day by all the people of Akaba as the site of ancient Aila. The shore, before it trends east and west, and the ruins (now merely a sandbank) run along the beach for a distance of about 250 yards, and extend as far inland. Thus Aila was a very small place at the best of times. The ruin-mound is about 10 feet deep, and appears to be clean sand without any signs of stone walls; the Arabs say, however, that these are to be found a little under the surface. The ground is covered with fragments of Arab glass of all colours—green, yellow, and claret-coloured were the most ordinary sorts, but the abundance was very strange. There was also a great deal of glazed pottery, some of it a metallic glaze, but much of it the kind of ware manufactured generally on the upper course of the Euphrates near Aleppo in the later Middle Ages. The distinctive black, yellow, and decomposed blue of Rakka ware predominated. With these distinct sorts there was much common pottery, including several fragments of a fine red ware, very smooth faced, decorated on the outside with incised bands containing little foliations and flourishes. This all pointed to an Arab settlement of some luxury in the early Middle Ages, and its gradual decay and abandonment not later than the seventeenth century. There was also some Byzantine pottery mixed in with the later stuff, and a very little of the red-ribbed Gaza ware. The

probabilities are that the classical Aila and the early Elath are both on the same spot below each other ; otherwise it would be hard to explain the absence of any other ruined site at the head of the bay. There are remains a little farther inland, and these represent probably a small village outside the gates of the larger place.

There are several ancient cities mentioned as having been situated at the head of this beach of the Red Sea. There is said to be the site of one in a valley some distance to the south of the present Akaba on the east coast of the sea, and on the west side perhaps there was a settlement at Taba. The state of the country when we were there in February, 1914, was, however, unfavourable to exploration. At the point commonly called El Deir or Umrashash, where the Nagb road drops to the beach, there seemed to be no ruins whatever, unless the platforms of the Turkish guard-houses cover ancient remains. If there has been anything it has been very small.

The other point of capital interest at the head of the Gulf, after Akaba itself, is certainly the small island off the western (Egyptian) coast near Taba, called by a variety of names, but at Akaba commonly Geziret Faraun (Plate III, 2). The Crusaders called it Graye consistently.

GEZIRET
FARAUN. It is, as seen from the shore, a small double island formed of two sharp points of rock, about 50 feet high each, united by a strip of sandbank raised only a few feet above the level of the sea. Between it and the mainland is a deep channel, perhaps 400 yards across. The island has been strongly fortified at several periods. All round the shore at sea level are to be seen the remains of a built wall of rough masonry about 4 feet thick, entirely destroyed down to the level of the beach. The Akaba water seems to have a curious effect of petrification (perhaps due to the coral there), which cements the shores into a single slab of conglomerate ; this wall therefore looks as natural a tipped stratum as need be, save for the tool-marks still showing on the inner edges of some stones. The date of this first wall it is impossible to determine. Within it there is a narrow beach of sand round the northern peak, the larger of the two rock masses of which the island is made up ; facing shorewards is a square tower of split porphyritic granite, the material of the island, and of all the buildings upon it. This tower has a window or door in its face about 8 feet above the water, which is shallow ; the real entrance to the fort was, however, probably from the sand beach on the seaward side. There is here a narrow path running up the cliff face, elsewhere nearly precipitous. The actual door

into the fort is very narrow, and the fort itself is small, though no smaller than the top of the rock, every inch of which it covers with its buildings. In the central block or keep there are about a dozen tolerable rooms, and in the extension to the north along the backbone of the ridge there are a few more. Attached to the keep, but half-way down the slope towards the sandy waist of the island, is a little mosque with plain plastered *mihrab* full of inscriptions cut by officers and men of "*H.M.S. Diana*" in 1896. The southern peak of the island is nearly as high as the northern, but much smaller, and the buildings on it are more ruined. It has a tower or two still standing, and some well-made rooms and passages with barrel vaults to their roofs. On the sandbank which unites the two peaks lie half buried some rough stone huts and circles, and there is also on it a little pool of salt water, perhaps 50 yards long. It is now filled with sand and débris, but has been deeper, and probably had an entrance from the sea. Set round the pond, as though for ornament, are some drums of columns in soft white limestone. There were two similar drums in a room in the keep of the northern building, and (from their stone-dressing) they seem of different period from the rest of the place. Of course they may well have been shipped across from some ruin at Akaba.

The actual mason-work of the castle is of the worst description. It is built of small split pieces of the red granite of the island and the mainland, and there has been little attempt to square any of the stones. Around the openings of windows, and in doors, and sometimes even at corners of the buildings, are worked blocks of soft yellow limestone, very roughly finished and without mouldings. Door and window heads are usually made of palm-logs, many of which remain in a rotten condition, and in the northern half of the buildings the roofs and the *chemin-de-ronds* of the curtain walls were also of this wood, with leaf and rib overlay. The walls are nearly mortarless, but inside were plugged with a hard smooth yellow lime plaster, that the great rooms might appear reasonably habitable. The remains of this pargetting are only to be seen in some inner window openings, which are rectangular and small. These had proved too numerous for later inhabitants of the fort, and two out of three of them have been walled up. The walls are usually about a yard thick (in places, more or less), and their tops are parapeted in very simple style. The outer windows of the fort are nearly all of the loophole type, very narrow outside, and broad within. The southern half of the fort is so much more ruinous than the north that it would suggest an earlier abandonment; also its construction is so much better on the whole, with free

use of lime cut stone and vaulting, that one would suspect it of being a twelfth-century construction. The pottery found in it was, however, not very early; practically all of it was metallic-glazed. The pottery of the north end of the fort was nearly modern, and its abandonment may have been as recent as a century or so ago. The only stone which showed any attempt at ornament was built incongruously sideways into the head of a half-destroyed window opening to the east on the northern rock. It was a roll moulding and some angle-ribs, and looked very much like a springer of a twelfth-century French roof; but it was such a tiny fragment that no reliance whatever can be placed on it. It has certainly, however, been re-used in its present position.

It is very hard to give dates to a building so characterless. There are some vaulted store-pits or cisterns that should be twelfth or thirteenth century Arab work, and the southern ruins may be of the same period, with later repairs. The whole of the north half of the fort is more like fifteenth or sixteenth century work, repaired in the eighteenth century. The loopholes and windows are some of them intended for cannon fire, and some seem more suitable for archery, so that a date in a transitional period is the most probable one. At the same time Akaba is a very out of the way place, and the roughness of the building may be due more to an emergency which forbade choice of materials than to a decadent period. The island has been planned, rather feebly, by Léon de Laborde, and his plan was republished, with very good photographs and notes, by P. Savignac, in the *Revue Biblique* for October, 1913. The fathers suggest for the building a date much earlier than I accept; the reference by Abulfeda* to the abandoned condition of the island in the fourteenth century does not in any way preclude a subsequent re-occupation during some crisis in the Red Sea and a partial rebuilding. Questions of dating apart, however, the account of the disposition of the rooms and defences in the *Revue Biblique* is admirably clear, and does far more than justice to the fort. The extreme poverty of the remains there struck the French observers very strongly, and they are in agreement that to try to date closely such ruins is unnecessary.

* Quoted from Rey, *Colonies Franques*, p. 399.

CHAPTER VI.

INSCRIPTIONS FROM SOUTHERN PALESTINE.

Greek : Nabatean : Arabic.

I. GREEK.

By M. N. TOD.

THE following inscriptions, copied by Mr. Woolley at Bir el Seba, Khalasa, Raheiba and Abda during the course of his survey of Southern Palestine, have been entrusted to me for publication. To carry out this task adequately would call for greater leisure and knowledge than I can command, but I have at least tried to draw the attention of scholars to the difficulties which have baffled me in order that they may point out the true solutions. To the Reverend Dr. G. B. Gray I would express my warm thanks for the aid he has kindly given me in connexion with several of the Semitic names contained in the inscriptions.

I have used the following abbreviations :—

A.J.A. = *American Journal of Archaeology*.

C.I.G. = *Corpus Inscriptionum Graecarum*.

C.R.A.I. = *Comptes Rendus de l'Académie des Inscriptions et Belles-Lettres*.

P.A.E.S. = *Publications of the Princeton University Archaeological Expeditions to Syria*. Division III, Greek and Latin Inscriptions.

P.E.F.Q.S. = *Palestine Exploration Fund: Quarterly Statement*.

R.B. = *Revue Biblique Internationale*.

Rec. = C. Clermont-Ganneau, *Recueil d'archéologie orientale*.

Wadd. = W. H. Waddington, *Voyage Archéologique : Inscriptions grecques et latines*. III. 6.

Z.D.P.V. = *Zeitschrift des Deutschen Palästina-Vereins*.

Twelve of the inscriptions copied by Mr. Woolley had been previously published.

- (A) *R.B.* 1893, 204; C. Clermont-Ganneau, *Archæological Researches in Palestine*, ii. 407 No. 8; E. Schürer, *Sitzungsberichte der Akademie zu Berlin*, 1896, 1081 No. 5. Found by Clermont-Ganneau in the house of Saliba 'Awad at Gaza: now in the gardens of the British Consular Agency there.
- (B) *A.J.A.* 1910, 66 ff., 426 f. Cf. *R.B.* 1910, 633 f.; *P.E.F.Q.S.*, 1910, 235 f.; *Revue des Études Grecques*, 1912, 66; *Z.D.P.V.* 1913, 236 ff. A photographic reproduction of the stone is given in *A.J.A.*, *loc. cit.* Now in the Government Serai at Bir el Seba.
- (C) *R.B.* 1903, 428 f. No. 8, with a photographic reproduction of a squeeze. Cf. *Rec.* v. 370 f. Now in the Government Serai at Bir el Seba. A rough limestone block, badly cut, worn, and defaced by a plaster wash.
- (D) *R.B.* 1903, 279, 426 f. No. 3 (with photograph of squeeze). Cf. *Rec.* v. 370, viii. 77; *Revue des Études Grecques*, 1909, 321; *Bull. Corr. Hell.* 1907, 332 f., 420; *R.B.* 1908, 150. Now in the Government Serai at Bir el Seba.
- (E) A fragment of the famous Byzantine Edict of Beersheba. *R.B.* 1903, 279 (with photograph of squeeze), 429 No. 9; 1906, 86 ff. (= *Rec.* vii. 185 ff.). Now in the Government Serai at Bir el Seba.

For other portions of this important document and general discussions of its contents see also: *R.B.* 1903, 275 ff.; 1904, 85 ff. (= *Rec.* vi. 210 ff.); 1906, 412 ff.; 1909, 89 ff.; *P.E.F.Q.S.* 1902, 234, 236, 269 ff., 385 ff.; *A.J.A.* 1908, 344 ff.; *C.R.A.I.* 1905, 541 f.; *Rec.* v. 130 ff., vii. 257 ff.

- (F) *R.B.* 1905, 252 No. 9 and Plate X. In the floor of a house near the cemetery, Bir el Seba. Limestone slab, deeply and clearly cut. The previous editors were unable to see the right-hand portion of the stone. Mr. Woolley's copy (Plate XXXIV. F.) thus serves to correct in several points their restoration of the text. We must read

[Ἐντα]ῦθα ὁ μακάριος - - ρο διάκονος κατε[τέθη] ἐν τῇ ιε' τοῦ
μη[νὸς Ἀ]πελλέου ἰνδ(ικτιῶνος) ὀγδόης +

Apellaeus 15th in the Arabian calendar corresponds to December 1st.

- (G) *R.B.* 1905, 255 No. 19*b* and Plate X. Khalasa. Limestone slab, with inscription incised and painted red.
- (H) *R.B.* 1905, 255 No. 17 and Plate X (*C.R.A.I.* 1904, 303 f.). Khalasa. Limestone, very roughly cut.
- (I) *R.B.* 1905, 255 No. 16. Khalasa. The variant readings of Mr. Woolley's copy are as follows :—l. 1 **ΥΠΕ** *i.e.* *υπέ* instead of *υπε'*; l. 2 there is no letter after **Π**; l. 5 has **Χ** as fourth letter with **Μ** or **Ν** beneath it in the following line, instead of **Μ** surmounted by a small *χ*; l. 7 has **ΑΙΕ**, l. 8 **ΠΡ** (in ligature) **ΠΕΠ**, l. 9 **ΚΕΚΚ**.
- (J) *R.B.* 1905, 255 No. 15 and Plate IX (*C.R.A.I.* 1904, 303). Khalasa. Limestone.
- (K) *C.R.A.I.* 1904, 299 f.; *R.B.* 1905, 249 f. No. 3 and Plate IX. Of this inscription Mr. Woolley saw only a photograph.
- No. 5 (below). See footnote *ad loc.*

The remaining inscriptions have not, so far as I know, been previously published. The sign $\frac{1}{10}$ (or $\frac{1}{5}$), which follows references to the Plates on which the copies are reproduced, denotes that those reproductions are one-tenth (or one-fifth) of the size of the original stones.

BIR EL SEBA (BEERSHEBA).

1. In the Government Serai. On a *tabula ansata* of coarse limestone, roughly cut: 0·33 × 0·25 m. Plate XXXIV.

Εὐτυχῶς ὠκεδομήθη ὑπὸ Ἀλεξάνδρου καὶ Βοήθου καὶ Ἀλκιβιάδ(ου) νιῶν
ΔΙΑΚΟΠΙ(A)ΝΟΟΥΘΙΚΟΥ ἔτει ρλς'.

With the opening words of this building-inscription we may compare *P.A.E.S.* A. 2, 177 (= Wadd. 2053) *εὐ<χ>τυχῶς ἐκοδομήθη ὁ πύργος*, and the concluding line of Wadd. 2381. The inflexion and spelling of *οἰκοδομέω* and its parts caused ancient engravers peculiar difficulty: see, *e.g.*, Wadd. 2436 *ἡκωδώμεσεν*, *P.A.E.S.* A. 2, 25 *οἰκωδώμεισαν*.

What follows *νιῶν* I cannot determine. A personal name in the genitive would seem most likely, though not absolutely necessary, and I had thought that **ΔΙΑΚΟ** might stand for *διακό(νου)* with the name following in l. 7: I am not, however, convinced that this is a Christian inscription, and its comparatively early date tells against this interpretation. A possible alternative is to read *διὰ Κορίνθου*? *οἰκ(οδόμ)ου*. The builder is often named

in such inscriptions and the word οἰκοδόμος is sometimes abbreviated (*e.g.* Wadd. 2022 *a*, 2091, 2235, 2299), though never, so far as I am aware, by contraction (see note on No. 4, below).

The year 136 will correspond, if the Arabian calendar is here used, to A.D. 241–2.

2. In the Government Serai. On a slab of white marble, complete except for the left-hand top corner. Plate XXXIV : $\frac{1}{10}$.

[+ 'Ανε]πάη ὁ μακάριος
 Ζόναινος **ΞΕΡΠΟΓΛ**
ΕΗΝ τῇ κβ' μην(νὸς) Ξανθικοῦ
 ἰνδ(ικτιῶνος) ζ', ἔτους τμθ'. +

The name of the deceased recurs in Nos. 15 and 16, in an epitaph of Raheiba (*A.J.A.* 1910, 61 No. 3), beginning + 'Ανεπάε Χάρετος Ζοναίνου, and, in a slightly different spelling, on another stele from the same place (*R.B.* 1905, 256 No. 30 and Plate X : illustrated in *C.R.A.I.* 1904, 300*) which bears the words Σεργίου Ζονένου. The word shows the regular form of the Arabic diminutive.

If the date is reckoned according to the Arabian calendar, the 22nd day of Xanthicus in the year 349 is equivalent to April 12th, A.D. 454. This falls within the seventh indiction, which began on September 1st, A.D. 453.

I leave it to the experts to determine what follows the name Ζόναινος, apparently a patronymic and an abbreviated term denoting profession or status.

3. In a garden near the cemetery. On a slab of limestone, very roughly cut, broken on the left and at the top right-hand corner. Plate XXXIV : $\frac{1}{10}$.

[+ 'Ανε]πάη μακαρ(ία)
 - - - όνη, γυνή
 [τοῦ θε]οσεβ(εστάτου) Σεπτίου?
 [ἐν μ]ην(ι) Δίου, ἰνδ(ικτιῶνος) η'.

I can make nothing of the name contained in l. 3 : Σεργίου is perhaps too bold a conjecture. For the epithet θεοσεβέστατος cf. Wadd. 2089–91 and note on 2089.

4. In the floor of a house near the cemetery. On a marble slab complete on every side. Plate XXXIV : $\frac{1}{10}$.

+ 'Ενθάδε κατ(ετέ)θη ἡ μα(καρία) Νόννα ἡ διάκ(ονος), μην(νὸς) Δαισ(ίου) κγ', ἰνδ(ικτιῶνος) α'.

For the shortening of words by contraction, *i.e.* by writing only the opening and closing letters, see E. Nachmanson, *Eranos*, x. 101 ff. (cf. G. Rudberg, *ibid.* 71 ff.). Deacons are commemorated in other inscriptions of Bir el Seba (*R.B.* 1905, 252 No. 9 and Plate X: *Rec.* vi. 185 ff.) and Raheiba (*R.B.* 1905, 256 No. 21 = *C.R.A.I.* 1904, 304).

The name Νόννος is found at Salkhad (Wadd. 2009) and at Philadelphia in Lydia (J. Keil u. A. von Premerstein, *Bericht über eine Reise in Lydien*, 76). Νόννα occurs in Central Asia Minor (*C.I.G.* 3989 b, 9266, 9269), and an inscription of Bir el Seba records the death of Νόννα Στεφάνου Αἰλησία (*R.B.* 1903, 279, 426), probably the same who is referred to in a Sinaitic text published by Euting and revised by Grégoire (see *Rec.* v. 370, viii. 76 ff.).

If the Arabian calendar is here employed, Daesius 23rd will correspond with June 12th.

5. In the Government Serai.* On a marble slab broken on the right. Roughly cut: 0·35 × 0·28 m. Plate XXXIV.

If we are to regard the initial letters of ll. 1, 2 as purposely deleted, we may restore conjecturally

Ἐντ[αῦθα κεῖτ]αι ἡ π - - Σωσάν[να - -

Σωσάννα, a variant of Σουσάννα, is found in an epitaph of Bir el Seba (*R.B.* 1903, 425 No. 1), as well as in a metrical inscription of Ravenna (*C.I.G.* 9869). Possibly, however, Σωσάν[δρα] should be restored here: Σώσανδρος occurs in two Syrian inscriptions (Wadd. 2684 a, c).

6. In a house near the cemetery. A fragment of a limestone slab, 0·20 × 0·18 m. Plate XXXIV.

The first line may contain part of the name Οὐαλέριον, not uncommon in this region (see, *e.g.*, *R.B.* 1905, 251 No. 8). In l. 2 we may have the name Ἀλκιμος, found in an epitaph of Durbah, near Hamath (Wadd. 2640).

7. In the Government Serai. On a slab of white limestone, 0·30 × 0·23 m. Plate XXXIV.

- - - ἡ Σαούδω.

Cf. *A.J.A.* 1910, 65 No. 19 (Raheiba) + Σαουδ. Clermont-Ganneau (*ibid.* 427) conjectures that this is an engraver's error for Σαού(λ), "nom propre

* Since this article was written, I have noticed that this inscription is published by F. M. Abel in *R.B.* 1909, 105 f.; the editor suggests the restoration π[αρθένος] in l. 2, and states that the stone was discovered at Khalasa.

mieux justifiable." But the name Σαοῦδος is well attested by Wadd. 2070 *d* Ταυρ[ί]νος Σαούδου, 2170 Αἶμος Σαούδου, 2516 τὸ μνημῖον Λεοντίου Σαούδου, and reappears in slightly modified forms in Wadd. 2364 (quoted by R. Brünnow, *Provincia Arabia*, iii. 308) Ὁβαίσματος Σαόδου and 2236 (cf. *Rec.* v. 147 f.), where the two forms Σαούαδος and Σαοῦδος occur side by side with reference to the same man.

8. In the floor of a house near the cemetery. Marble slab, well cut. Plate XXXIV : $\frac{1}{10}$.

+ Ἐνθάδῃ κατηγ(έθη) ὁ μακ(άριος) - - -

If nothing further was written on the stone, we may perhaps regard it as one kept in stock by the mason, who would have filled in the name (and date) after finding a purchaser.

9. In the Government Serai. On a fragment of white marble, 0·18 × 0·22 m. Plate XXXIV.

The mutilated remains of l. 1 probably refer to the month and day of death of the person here commemorated : if so, we may read conjecturally

- - Δίου ἰ' [ῥας τρί?] της ἰνδ(ικτιῶνος) - +

10. In the floor of a house near the Serai. On a fragment of a marble slab. Plate XXXIV : $\frac{1}{10}$.

- - τ ἰνδ(ικτιῶνος) ἰ' - - - [κατ]ετέθ[η],

or possibly

- - τ ἰνδι[κτιῶνος] - - - κατ[ετέθ[η]].

KHALASA (ELUSA).

11. On a limestone slab. Plate XXXIV : $\frac{1}{5}$.

Θάρσι, Οὐάλα, οὐδ[ι]ς ἀθά[ν]ατος . μηνὸς Δίστρον ἀκ', ἔτους τκ'.

This transcription rests upon the copy and a squeeze.

For this type of epitaph see No. 19 (below) and comment. The 21st of Dystus in the year 320 would be equivalent, if the Arabian calendar is here used, to 7th March, A.D. 426. Οὐάλα I take to be the vocative of Οὐάλης. This name occurs frequently in Syria and elsewhere as the equivalent of the Latin Valens, and then has the genitive Οὐάλεντος, and so on : in other examples, however, it clearly represents some native name, which appears also

in the Latin forms Vahalus (*P.A.E.S.* A. 3, 233 = Wadd. 2058) and Vahlis (*P.A.E.S.* A. 4, 536): see, *e.g.*, Wadd. 2022 *a ἐπὶ προνοία Σέου Ουάλου*, 2203 *a ῥάεσος Ουάλου*, *P.A.E.S.* A. 3, 358 (and comment), 387, 412. Here the form of the vocative shows that the native name is intended.

12. In the cemetery to the east of the town. On a limestone slab. Plate XXXV : $\frac{1}{5}$.

+ Ἀν(ε)πάε μακάριο(ς) Ἰωάννης Ἀβονήου [ἐ](ν) μεν(ι) Δησίου ιζ' ἐνδεκ[τ]ιῶνος [ι]β', ἔτους νιδ'.

My reading of line 3 is uncertain. If the calendar here followed is that "of the Arabs," which we know to have been in use at Khalasa (see Nos. 13, 34 and notes), Daesius 17th of the year 414 corresponds to June 6th, A.D. 519. As this date falls within the twelfth Indiction (beginning September 1st, A.D. 518), I have restored ιβ' in place of the β' which stands in the copy.

13. In a graveyard on the Saadi road. On a limestone slab, perfectly preserved. Letters well cut. Plate XXXV : $\frac{1}{5}$.

+ Ἀνηπάη ὁ μακάριος Στέφανος Βοήθου ἐτὼν τριάκοντα τριῶν ἐν μεν(ι) Π(α)νήμου ζ' ἐβδόμῃ, ἰνδ(ικτιῶνος) θ', ἔτους νκς' +

In l. 3 the engraver appears to have written ΠΤ in place of ΠΠ. The repetition of the word ἐβδόμη after the numerical sign ζ' is curious, but not unparalleled. Panemus 7th in the year 426 would correspond to June 26th, A.D. 531, if the calendar here employed were that of the Arabs (see *Rec.* vi. 122 ff.): that this is the case is rendered almost certain by the fact that this date falls within indiction 9, which begins on September 1st, A.D. 530.

14. In a graveyard on the Saadi road. Limestone, well cut: complete except at the top. Plate XXXV : $\frac{1}{5}$.

+ Ἀνεπάη ὁ μακάριος Ἐρασίνος ἐ(ν) μεν(ι) Δύστρου ιή, ἰνδ(ικτιῶνος) ιγ'.

+ Ἀνεπάη ὁ μακάριος Γεόργιος Ἰωάννου ἐπαγομένον πρότε ἰνδ(ικτιῶνος)

The name Ἐρασίνος recurs in No. 34 (below). If the Arabian calendar is here used, as seems to be the case in No. 13, Dystrus 18th is March 4th, and the first of the intercalary days (ἐπαγομένων πρώτη) is March 17th. In the second epitaph the indiction number is accidentally omitted: probably it too was ιγ' (13) and the two persons commemorated died within a fortnight.

15. The upper part of a slab of limestone. The letters are roughly engraved. Plate XXXV : $\frac{1}{5}$.

+ Ἀνεπάε ὁ (μ)ακάριος
Ζόναϊνος Ὀβέδωνος - - - - ε - - -

The inscription is not easy to decipher, but I seem to see on the squeeze an **Ε** as the last letter of l. 1, **Π** at the close of l. 2, **ΖΟ** at the beginning of l. 3. This gives us the name *Ζόναινος*, which we already know from No. 2 and elsewhere (see note *ad loc.*). Whether the next name is *Ἀβέδωνος* or *Ὀβέδωνος* I cannot determine, though the latter is, to judge from the squeeze and the copy, rather more probable. With the former we may compare *Ἀβδος*, *Ἀβδαῖος* (Wadd. 2008, 2447, 2603), and the first element in compounds such as *Ἀβεδνεσούβης*, *Ἀβεδράψας*, *Ἀβδούβαστις*, *Ἀβδύζμωνος*, etc. (*C.I.G.* 9612, 4463, Wadd. 1866 c, 2569, 2596, *P.A.E.S.* A. 4, 567, 569), with the latter the second element in *Ἀβδοόβδας* (*P.A.E.S.* A. 4, 567, 569), *Ὀβέδας* (*Rec.* vi. 332), *Ὀβεδος* or *Ὀβαιδος* (Wadd. 1984 c, 1977), and *Ὀβόδας* (*C.R.A.I.* 1904, 288 ff., *R.B.* 1905, 82 ff.).

If the name is derived from **נבנ**, we should certainly expect it to assume the form *Ἀβδων* rather than *Ἀβέδων*.

16, 17. Two adjoining fragments of a limestone slab: the surface is scratched and defaced, and the inscription is in consequence hard to decipher. Plate XXXV: $\frac{1}{5}$.

The stone is difficult to read, and the copy must be corrected in several points by the squeeze. Thus the first letter of l. 1 is clearly **Ε**, and that of l. 5 **Δ**. The last three letters of this line are unmistakably **ΕΝΜ**, the fourth of l. 7 is **Ξ**, but what follows is undecipherable, though I seem to detect on the squeeze a **Υ** followed by a tiny fragment of a **Ξ**. With all due reserve, then, I propose the following reading:—

Ἐτελεύτεσε[ν]
ὁ ἐν ἁγίο(ις) μακ[ά]-
ρ(ιος) Ἀλαφα Λ. ΕΑ
. βου Ζοναῖνο[ν]
5 διακ(όνου) ἐν μ[ηνὶ Ὑπε]-
ρβερ(εταίου) γ', ἐν[δ(ικτιῶνος) -]
ἔτους νξ.'

The name of the deceased, contained in l. 3, is uncertain: *Ἀλαφα* seems to me fairly clear, but what follows is puzzling alike in reading and in construction, nor do I know whether *Ἀλαφα* is a complete name. We may compare *Ἀλολεφα* in (*J*) above, *Ἀλαφιρ* in *A.J.A.* 1910, 64 No. 13, *Ἀλάφθα* in Lidzbarski, *Ephemeris* i. 86, 191, and especially *Ἀλαφᾶν* (*Χαλαφάνης*), *ibid.* ii. 338 f. For the name *Ζοναῖνου* (l. 4) see No. 2 and note. Hyper-

beretaeus 13th in the Arabian calendar is equivalent to September 30th : if I have read aright the first two numerical signs, the year is A.D. 565-6, or one of the nine following years.

18. On a limestone fragment : the inscription is poorly cut, and the surface has flaked away. Plate XXXVI : $\frac{1}{5}$.

Θά[ρσι], Κασάνδρη, [οὐ]δ[ι]ς ἀθάνατος.

For this type of epitaph see No. 19 (below) and note. The text, reconstructed from the copy and a squeeze, is, I think, certain, though I do not understand why Κασάνδρη is used in place of Κασ(σ)άνδρα.

19. Limestone. Plate XXXVI : $\frac{1}{5}$.

Θάρσι, Μοφάδδη.

Perhaps the words οὐδείς ἀθάνατος were added on the stone below. For this type of epitaph see, *e.g.*, Nos. 11, 18 (above), *R.B.* 1905, 251 No. 8, 255 No. 15 (= *C.R.A.I.* 1904, 303), 256 No. 34. Μοφάδδη must, I take it, be a personal name, but I have not found any parallel to it, or explanation of its meaning.

20. In a cemetery on the Saadi road. On a limestone plaque, on which a large cross is engraved. Plate XXXVI : $\frac{1}{5}$.

Μαρία Καικούμο[υ].

Μαρία is the commonest woman's name in this district. The name Καίουμος (or -μας) is attested by several Greek inscriptions of Syria, *e.g.*, *P.A.E.S.* A. 2, 20 a, A. 3, 261, 267, *R.B.* 1903, 274 f. Clermont-Ganneau reads Καιούμας in place of καὶ Οὔμας in *Bull. Corr. Hell.* 1902, 201 No. 50, and is inclined to correct the ΚΑΙΟΥΝΩ of Wadd. 2089 into Καιούμον (*Rec.* v. 368 ff.). We also meet with the names Καίαμος (Wadd. 2103, 2253 a, 2436) or Καϊταμος (Wadd. 2413 j) and Καέμας (*P.A.E.S.* A. 3, 302). Whether Καίαμος and Καίουμος are different names or variant spellings of the same name is doubtful : Clermont-Ganneau regards them as distinct (*Rec.* v. 369) ; the American scholars are divided (*P.A.E.S.* A. 3, 261 note). While leaving the decision to those who have a right to pronounce one, I would call attention to a small piece of evidence, which may or may not be of importance, but has, I think, been overlooked. In Wadd. 2089-91 we have three building-inscriptions from the same place ('Amra in Batanaea), the similarity of which, alike in phraseology and in the names they contain, seems to point to a close

connexion between them : 2089 is dated ἐπὶ τοῦ θεοσεβ(εστάτου) Ἡλίου καὶ Καιούνω πρ(εσ)β(υτέρου), 2090 ἐπὶ τῶν θεοσεβ(εστάτων) Δονέσου κ(αὶ) Ἡλίου, 2091 ἐπὶ τῶν θεοσεβ(εστάτων) Καιάνου (so I would write the name instead of Καιανοῦ) καὶ Δονήσου καὶ Ἡλία πρεσβ(υτέρων). I find it hard to resist the inference that the Καιούνω of 2089 and the Καιάνου of 2091 represent one and the same man, and that if Clermont-Ganneau corrects the former to Καιούμου he should correct the latter to Καιάμου. The name ܡܝܢܝ is found also in Syriac (see Payne-Smith, *Thesaurus* ii. 3600) and may be derived from the root ܡܢܝ, denoting strength or permanence (*ibid.* 3523).

21. In the graveyard east of the town. Limestone, 0·20 × 0·14 m. Plate XXXVI.

+ Σέργιος Ἰωάν[νου].

Both names are common in this region.

22. In a graveyard on the Saadi road. On a limestone slab. Plate XXXVI : $\frac{1}{5}$.

I cannot read the first line of this inscription. On the right we have, perhaps, the word χαῖρε, below Θεοδωρίς (unless we should read Θεόδωρε or Θεοδώρα), and within the circle A and ω.

23. On a limestone slab, of which the upper left-hand and the lower right-hand corners are broken away. It is covered with a thick deposit, which hides much of the surface. Plate XXXVI : $\frac{1}{5}$.

I cannot restore this inscription. In l. 1 we may have the latter part of the word [μν]ήμην, and in l. 4 the beginning of μη[νός]: in l. 5 we certainly have ἰνδ(ικτιῶνος), but the indiction-number is lost.

24. On the lower part of a limestone stele, broken off above, 0·30 × 0·25 m. Plate XXXVI.

The letters ΑΒΡΔΙ I cannot explain.

25. In a cemetery on the Saadi road. On a fragment of limestone, engraved with a large cross. Plate XXXVI : $\frac{1}{5}$.

I cannot interpret the extant letters.

26. Limestone plaque, broken into two. Plate XXXVII : $\frac{1}{5}$.

Of the inscription I can make nothing.

27. On a fragment of a marble slab. Plate XXXVII : $\frac{1}{5}$.

The inscription is too mutilated to be capable of restoration.

RAHEIBA (REHOBOTH).

28. On a limestone slab, complete on the left and below.
Plate XXXVII : $\frac{1}{5}$.

+ 'Ανα[πάη ὁ μα]κάριος) 'Επ - - -

The inscription probably begins thus : the rest is too mutilated to admit of restoration.

29. On the circular top of a limestone stele. Plate XXXVII : $\frac{1}{5}$.

I have not succeeded in deciphering this inscription. It apparently begins + 'Ανεπάε ἡ μακ(αρία), if the sign which follows the α of line 2 is a κ, followed in turn by the sign of abbreviation. Then come the name and patronymic of the deceased (Κασ. ολη Πέφτου?), and finally the date (μηνὸς 'Απ[ελλαίου?] ι[γ'] ἔτ(ους) - -).

30. Around the circular top of a limestone stele. Plate XXXVII : $\frac{1}{5}$.

The beginning and the end I cannot understand : between come the words :—

- - ὁ μακ(άριος) Στέφ(ανος) καὶ - - -

31. Round the circular top of a limestone stele. Plate XXXVII : $\frac{1}{5}$.

Only the words

Παρθένε Θ(ε)ῶ(?)

are legible : the latter may well be part of the adjective θεοσεβής or θεοφιλής.

32. On the lower part of a circular-topped limestone stele.
Plate XXXVII : $\frac{1}{5}$.

Beyond the concluding word, ἔτους, preceded by a numeral, I can make nothing of this inscription.

33. On a fragment of a circular plaque of limestone, on which a cross is engraved. Plate XXXVII : $\frac{1}{10}$.

The inscription has been lost save for three letters.

ABDA (EBODA).

34. On a marble slab on the south of the church, 1·50 × 0·55 m.
(See Fig. 34.)

* + 'Ανεπάη ὁ μακάριος Ζαχαρίας 'Ερασίνου ἐν μηνὶ Πανέμου δεκάτῃ, ἰνδ(ικτιῶνος) ιδ', ἡμέρᾳ Κυριακῇ, ὥραν τρίτη(ν) τῆς νυκτὸς, κατετέθη δὲ

ἐνταῦθα τῇ τρίτῃ τοῦ σάμβατος ὥραν ὀγδόην Πανέμω δωδεκάτῃ, ἰνδ(ικτιῶνος)
 ἰδ', ἔτους κατὰ Ἑλουσ(ίους) νος'. Κ(ύρι)ε <α> ἀνάπαυσον τὴν ψυχὴν
 αὐτοῦ μετὰ τῶν ἁγίων Σου. ἀμήν.

The name Ἑρασῖνος recurs in No. 14 (above). If the calendar here used is that "of the Arabs," Panemus 10th and 12th of the year 476 will answer to June 29th and July 1st, A.D. 581. The fact that these dates fall within Indiction XIV (which began on September 1st, 580) supports the hypothesis. It is curious to find this calendar here referred to as that κατὰ Ἑλουσίους, a phrase which does not, so far as I am aware, occur elsewhere: Ἑλοῦσα is the ancient name of Khalasa, and we have already seen evidence that the calendar in question was in use there (No. 13: cf. *R.B.* 1905, 253 ff.).

The precision of the epitaph, which records not only the date, but the day of the week and even the hour, of death and burial, is worth notice. The word σάμβατος has a two-fold peculiarity, the substitution of μβ for ββ (for which many parallels could be quoted) and the derivation from a nominative σάββα in place of σάββατον, of which I know no other examples save the dative plural σάββασι quoted in Sophocles' *Lexicon* from Macc. i. 2, 38, Meleager 83, and Josephus, *Ant.* xiii. 12, 4; xvi. 6, 2.

35. Graffito on door-jamb of baths, incised in the stone. (See Fig. 39.)

The inscription apparently runs

Κ(ύρι)ε [β]οήθι Στ[εφάν]ου,

and may be complete, though in such texts words like τοῦ δούλου Σου are ordinarily added. The substitution of the genitive for the dative after βοήθει is a very common phenomenon. Cf. *A.J.A.* 1910, 65 No. 2 (Bir el Seba) Βοήθε [Στεφά]νου, Κύριε, κτλ.

36. Graffito on door-jamb. (See Fig. 41.)

The name Δόμνα is clear; the rest I do not understand. Δόμνος and Δόμνα occur frequently in inscriptions of Syria, e.g., Wadd. 1894, 2413g, 2573, 2642 a, 2683.

I take this opportunity of correcting an error which has crept into the publication of an epitaph from Sbaïta in the Negeb. According to the editors it closes with the words ὁ Θ(εὸς) ἀναπαύσῃ δϋῖον (*R.B.* 1905, 257 No. 35 = *C.R.A.I.* 1904, 304). For ΔΥΙΟΝ we should clearly read ΑΥΤΟΝ (see *R.B.* 1905, Plate X) and we thus get a prayer similar to those in *R.B.* 1905, 250 No. 4 (= *C.R.A.I.* 1904, 301) Θ(εὸς) αὐτὸν ἀναπαύσῃ and *R.B.* 1903, 425 Κ(ύριος) αὐτὴν ἀναπαύσῃ.

In No. 11 of the Raheiba inscriptions published by N. Schmidt and B. B. Charles (*A.J.A.* 1910, 60 ff.) the final ζε may well stand for ζῆ, while in No. 14 the εϋλα may be a fragment of the word εὐλαβέστατος, found, *e.g.*, in Wadd. 2413 *a*.

II. SEMITIC.

The following note on a Nabatean inscription at Khalasa (*see* p. 109) is contributed by Dr. A. Cowley :—

The text, based on a hand copy and a squeeze (Fig. 59), is as follows :—

- | | |
|-----------|----|
| זנה אתרא | 1. |
| זי עבד | 2. |
| נחירו | 3. |
| על חייה | 4. |
| זי ח[ר]תת | 5. |
| מלך | 6. |
| נבטו | 7. |

“This is the place which Nuthairu (?) made for the life of Aretas, King of the Nabateans.”

Line 1. **אתרא**, the last two letters are broken, but are almost certainly to be so restored. As, *e.g.*, in *C.I.S.* ii, 235², the word probably means a chapel or votive pillar.

Line 3. Nuthairu. I cannot find the name. The first letter might be ז, but that would be no better. Or it may be only the left-hand stroke of a letter. The fourth letter might be ד or even ב (?).

Line 4. The usual formula is **על חי פ** (*cf.*, *e.g.*, *C.I.S.* ii. 354²).

The inscription is merely votive, like so many of those collected in the *C.I.S.*, and from that point of view does not call for much remark. Its interest lies in the forms of the characters, which are somewhat like those in *C.I.S.* ii. 162, but earlier in style. In fact they belong to an Aramaic alphabet which is only just beginning to develop the peculiarly Nabatean forms. None of the letters is typically Nabatean. Note, *e.g.*, א, ב, י, ל, מ. What then is

pieces was found lying on the side of the road down the Nagb el Akaba, a few hundred feet above the bridge in Wady el Musri (*see* p. 12). A few characters which were missing have been restored in the transcription. Professor D. S. Margoliouth contributes the following note :—

INSCRIPTION OF THE SULTAN KĀNṢUH AL-GHŪRI.

(Compare Van Berchem, *Corpus*, p. 594, sqq.)

In Ibn Iyās's list of the buildings, etc., erected by this Sultan (A.D. 1500–1516), we read (iii. 62, last line): *He repaired the road of 'Akabah and Duwar Ḥakn, and built there a Khān with towers over its gate and set therein storage-places for the deposits of the pilgrims.* The inscription, which was carefully squeezed and copied, is as follows :—

امر بقطع هذا الطريق المبارك مولانا السلطان الملك الاشرف قانصود الغوري عز
نصره وكان الواقف في هذا الخان المبارك ابراجا له (ودائع الله) (جارج)

The cutting of this blessed road was ordered by our master the Sultan al-Malik al-Ashraf Kānṣuh al-Ghuri, may his help be strong, who also erected in this blessed khān towers for the deposits of the pilgrims.

The last letters are not quite clear, except for the word meaning *towers*. We are probably safe in supplementing from Ibn Iyās.

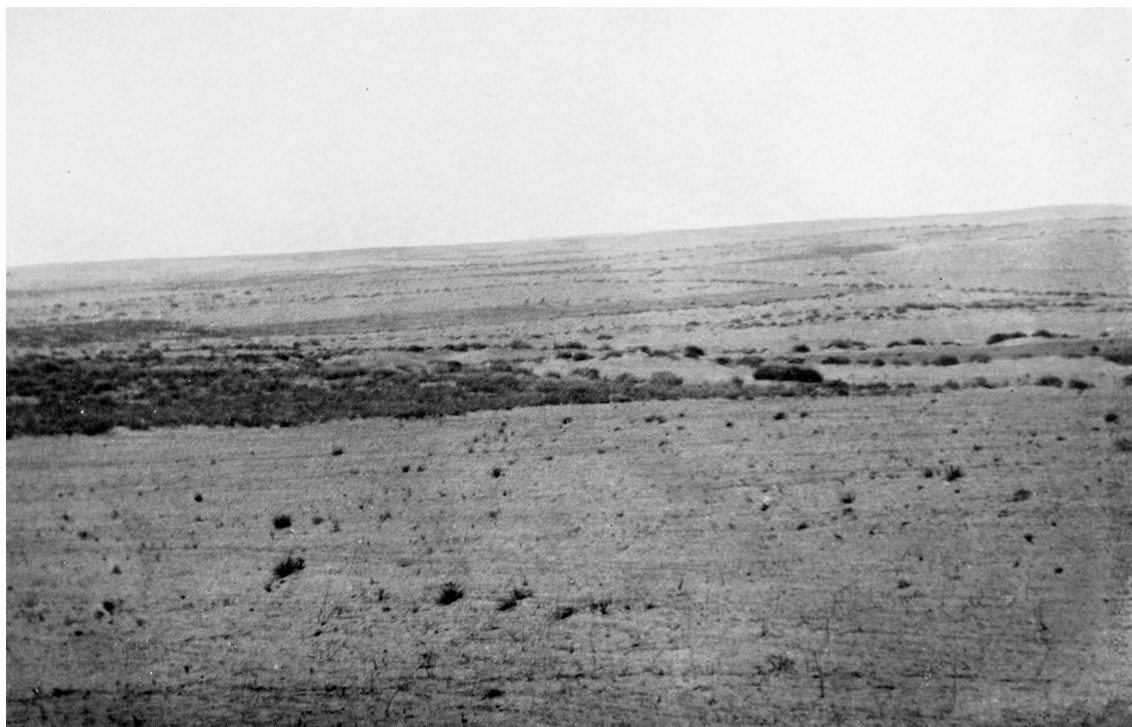
The phrase الواقف is ordinarily used somewhat differently.



(1) BETWEEN BEERSHEBA AND KHALASA.



(2) WADY EL KHALASA.



(1) WADY ISSAD, SHOWING TAMARISK HEDGES OF BYZANTINE FIELDS OF KHALASA.



(2) JEBEL ARAIF EL NAGA FROM WEST.



(1) NAGB EL AKABA.



(2) GEZIRET FARAUN.



(1) AIN GHARANDEL.



(2) CAIRN AT TELL EL SERAM.



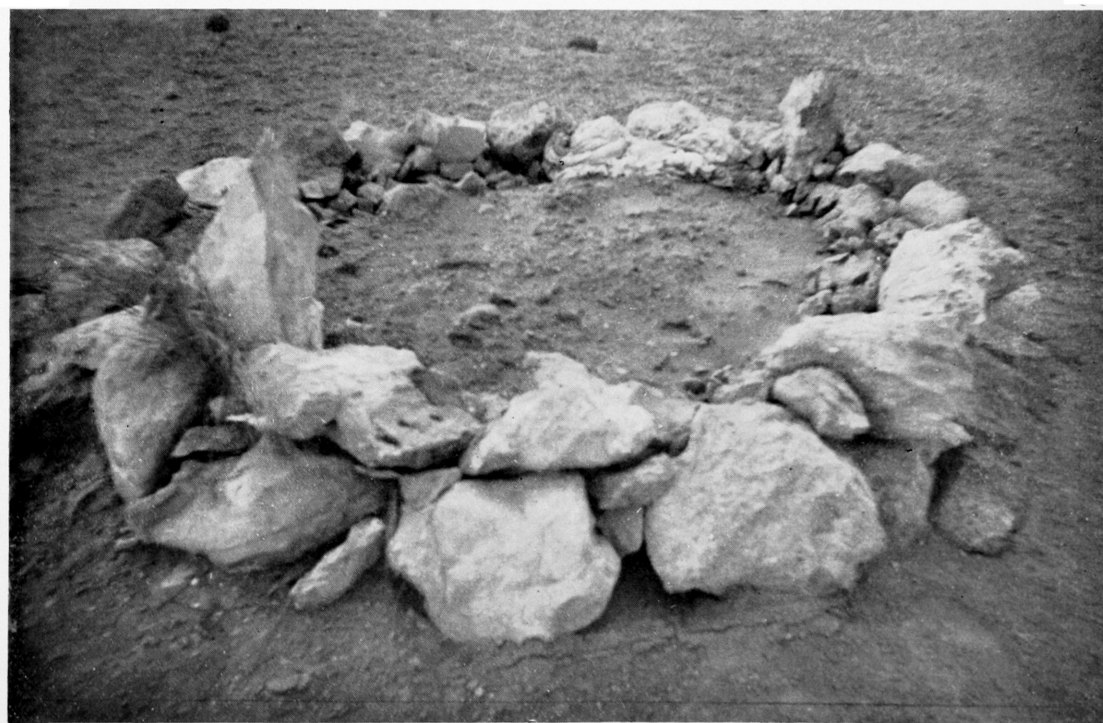
(1) TOMB AT TELL EL SERAM BEFORE EXCAVATION.



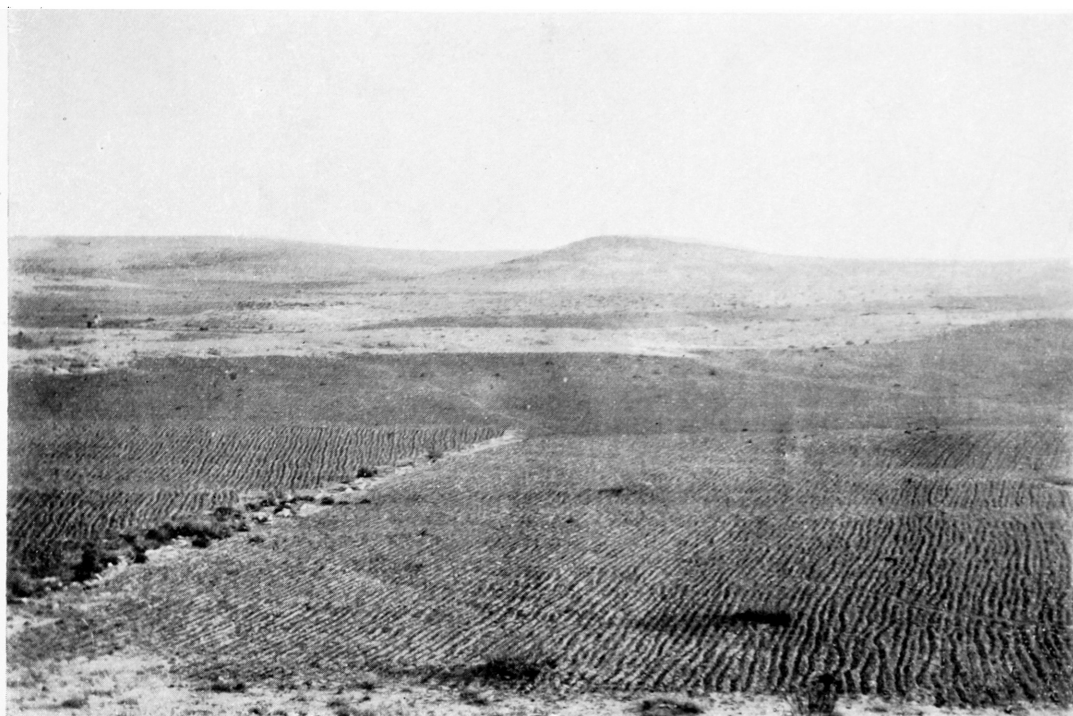
(2) SAME TOMB AT TELL EL SERAM AFTER EXCAVATION.



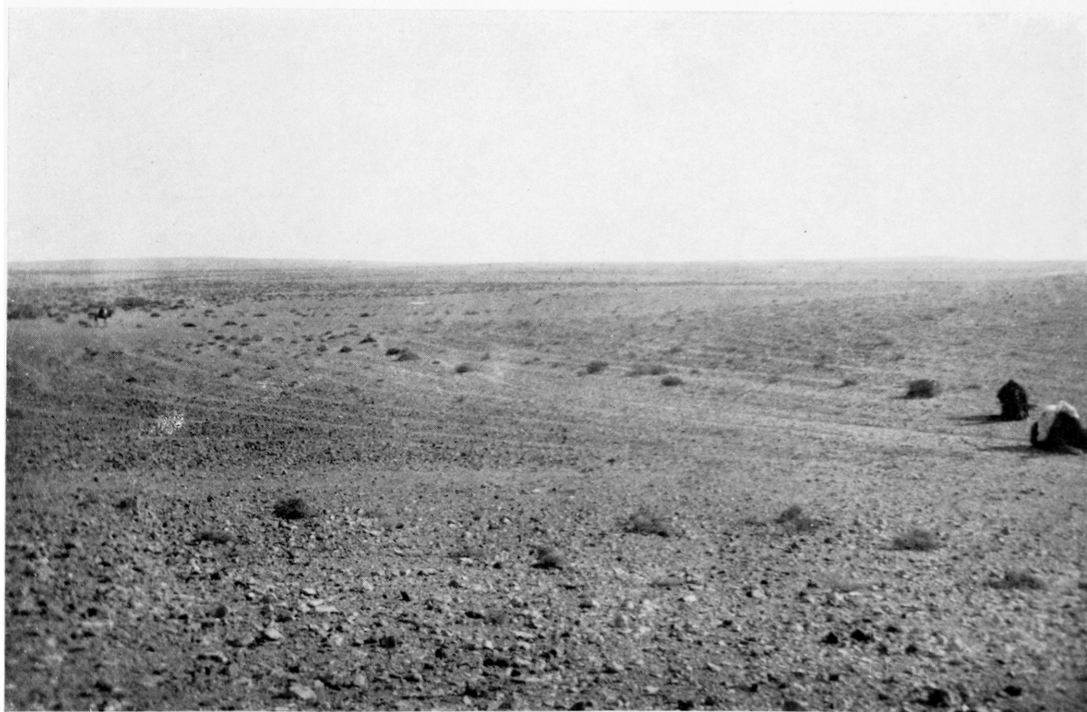
(1) OLD TOMB AT KOSSAIMA.



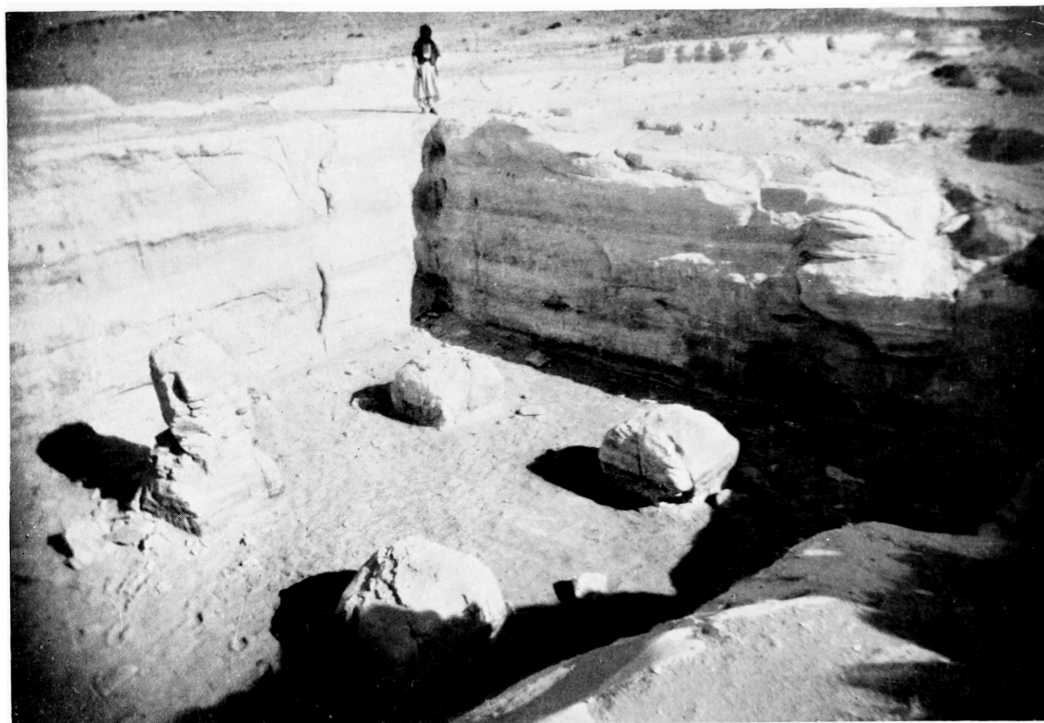
(2) MODERN TOMB AT KOSSAIMA.



(1) TELL EL KASR EL RAHEIBA.



(2) DARB EL SHUR ABOVE BIR BIREIN.



(1) BYZANTINE CISTERN ON DARB EL SHUR NEAR BIR BIREIN.



(2) BIR BIREIN.



DAFB EL SHUR BELOW JEBEL MUSHRAG, WHERE IT TURNS WEST FOR EGYPT.



WADY AIN KADEIS, LOOKING UP THE VALLEY OVER THE WATERING PLACE.



(1) AIN KADEIS : SPRING AND RIVULET.



(2) AIN KADEIS : THE SPRING.



(1) AIN KADEIS : THE WILD FIG-TREES.



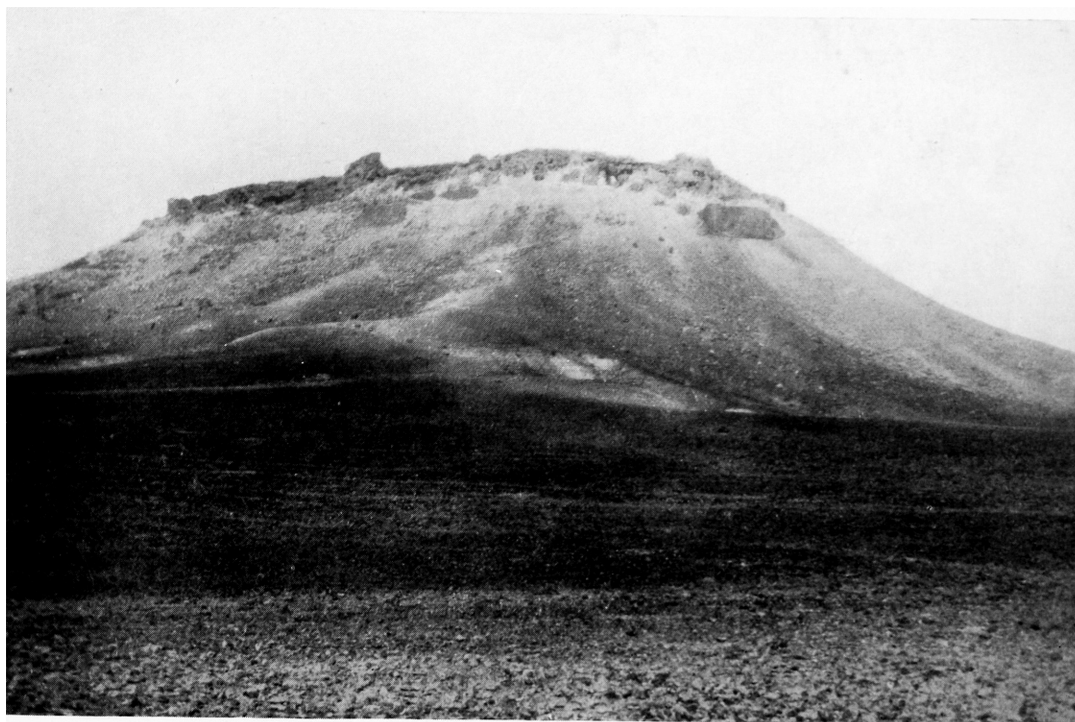
(2) AIN KADEIS : A FURNISHED GRAVE.



WADY AIN EL GUDERAT: THE TELL IN THE VALLEY.



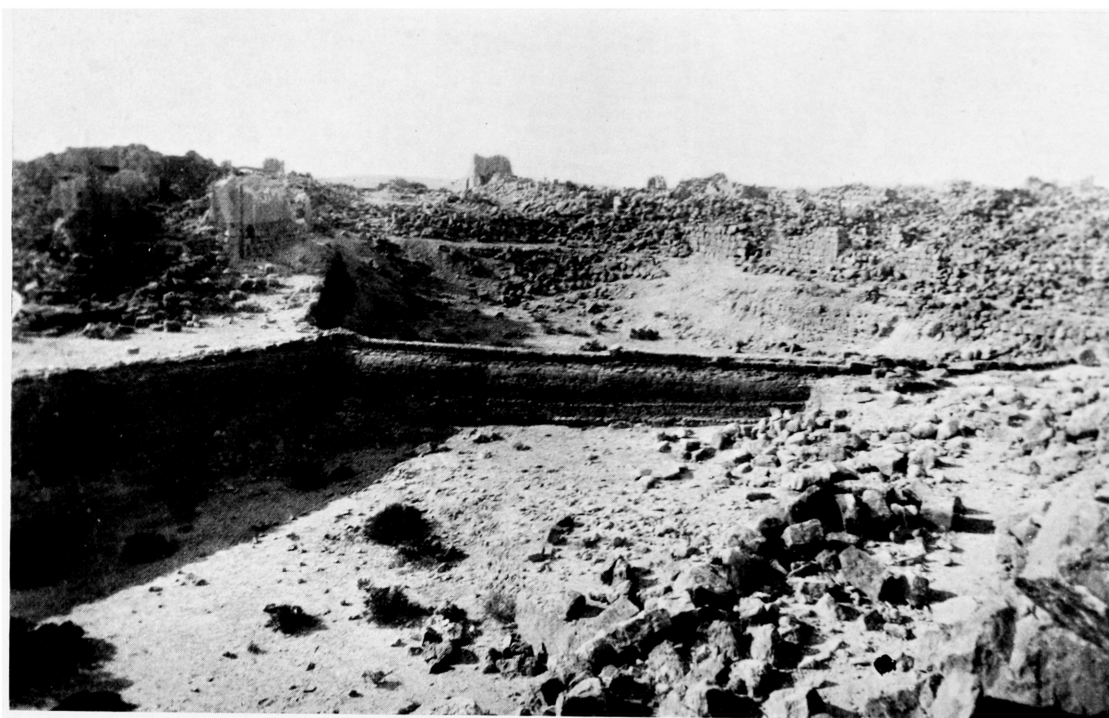
AIN EL GUDERAT.



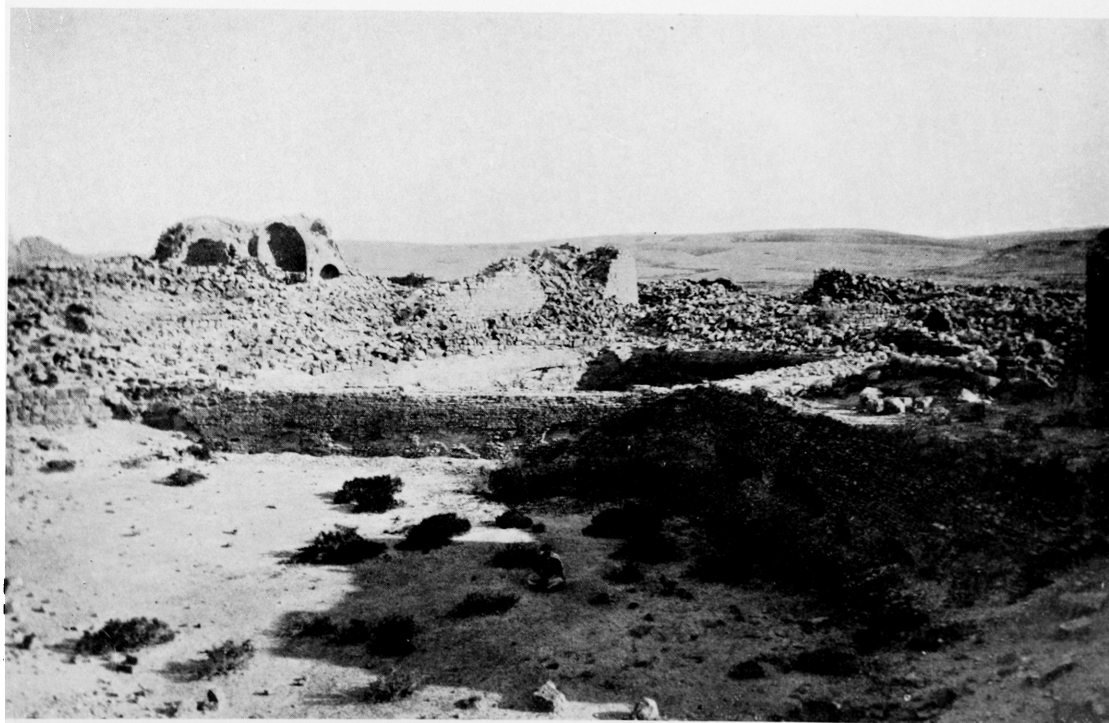
(1) MISHRAFA.



(2) ESBEITA.



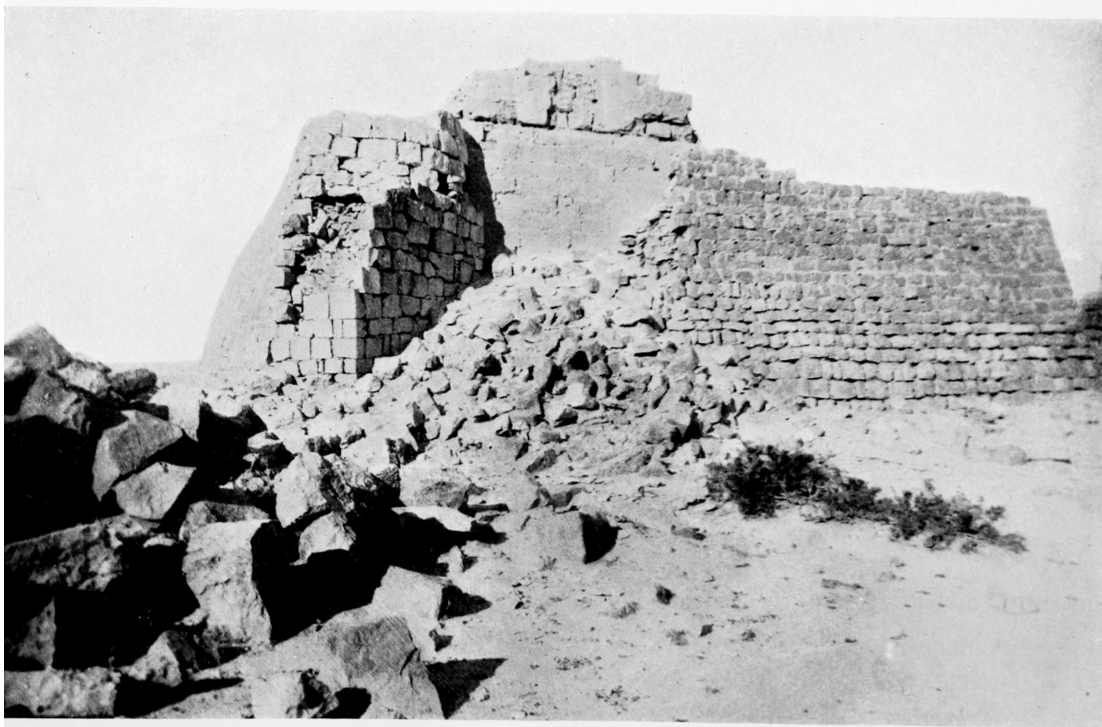
(1) ESBEITA : RESERVOIRS.



(2) ESBEITA : RESERVOIRS.



(1) ESBEITA: NORTH CHURCH FROM ITS WEST FRONT.



(2) ESBEITA, NORTH CHURCH: FORTIFIED POSTERN ON S.W. ANGLE.



(1) ESBEITA : PRIVATE HOUSE.



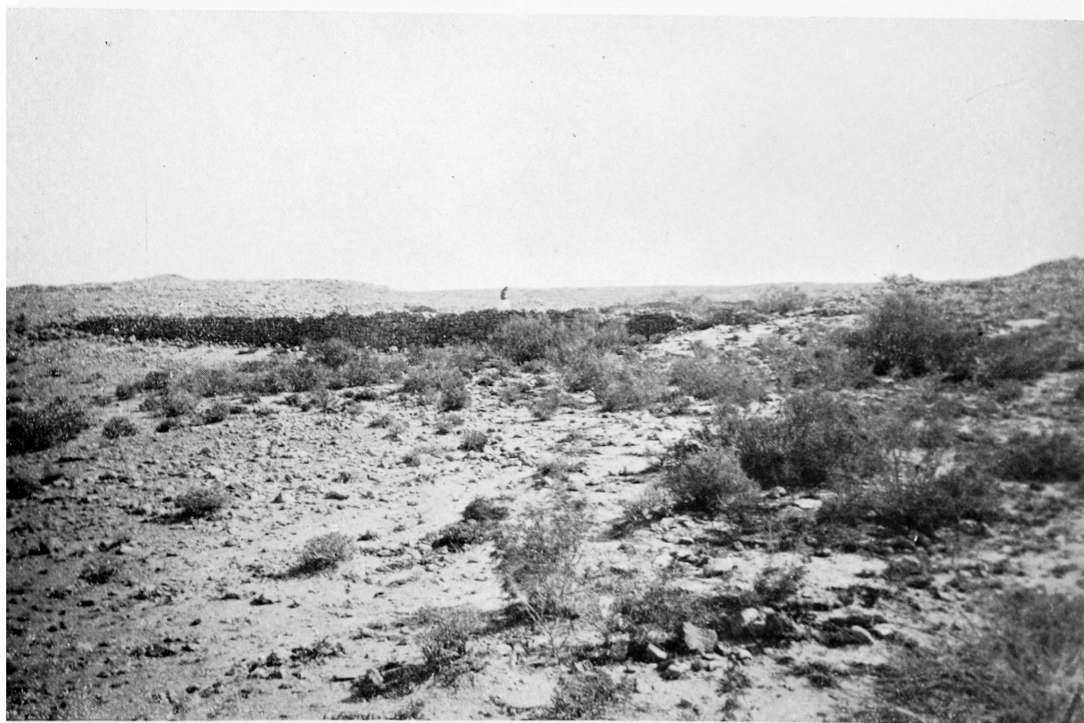
(2) ESBEITA : A WALL, SHOWING MANNER OF CONSTRUCTION.



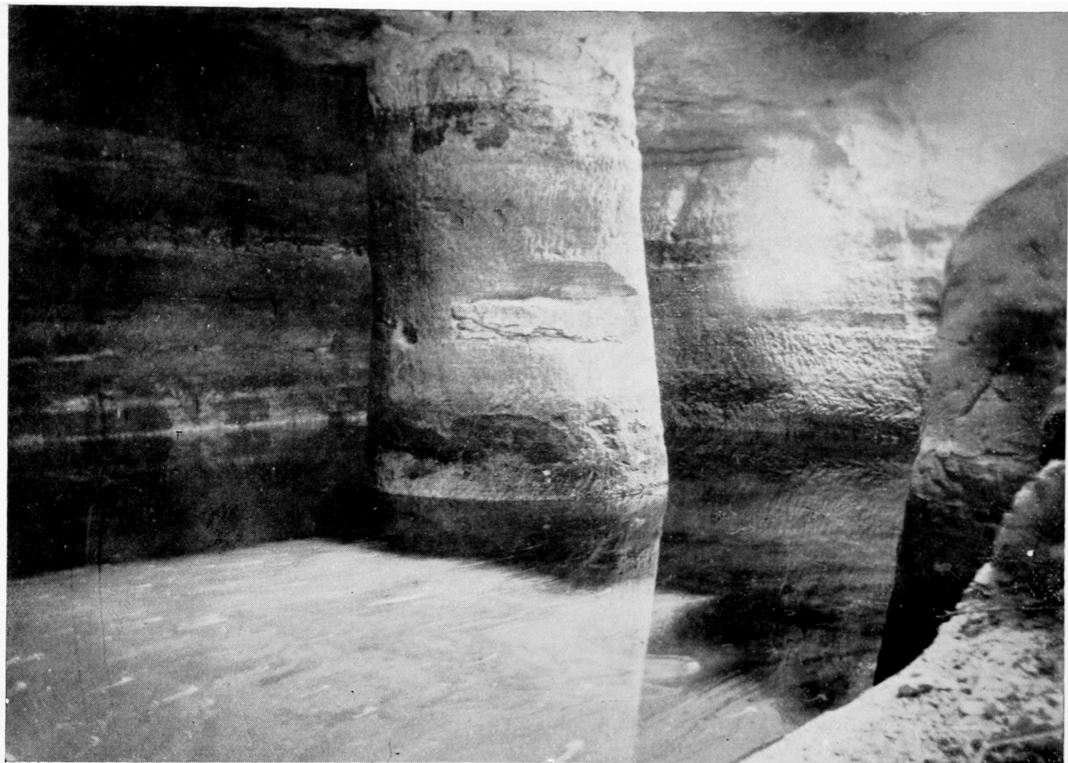
ESBEITA : VAULTING AND CEILING.



(1) ESBEITA: HOUSE WITH UPPER STOREY.



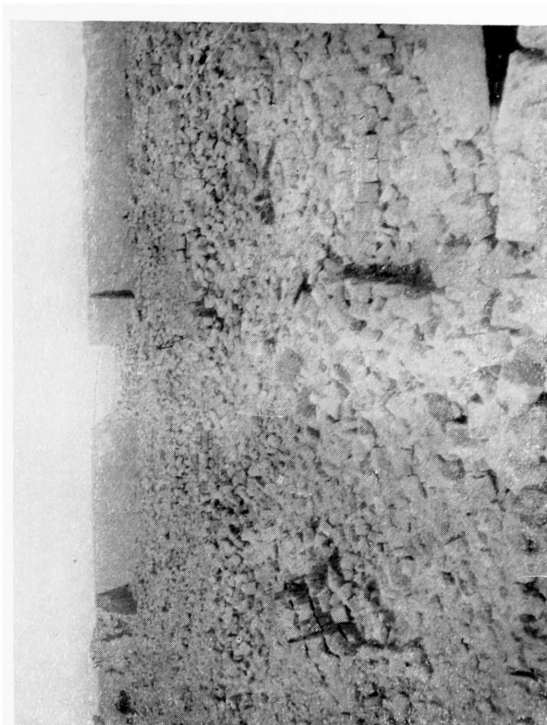
(2) ESBEITA: TERRACE-WALL IN A VALLEY.



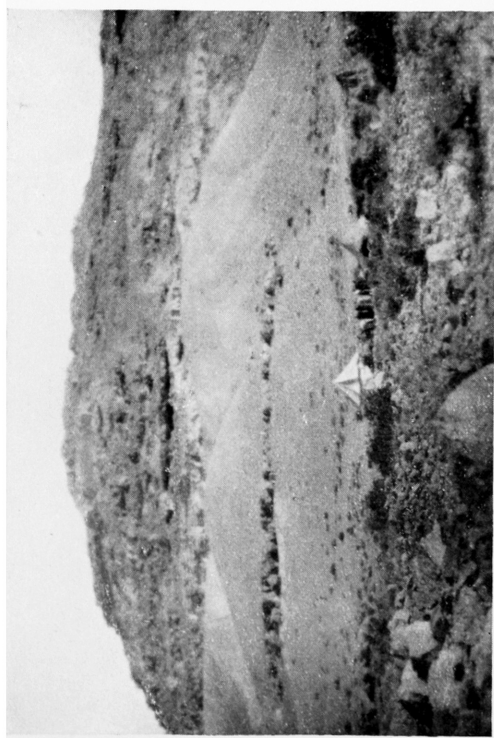
(1) KHORAISHA : ROCK-CUT CISTERN.



(2) ABDA : CASTLE INTERIOR FROM THE TOWER OF THE SOUTH CHURCH.



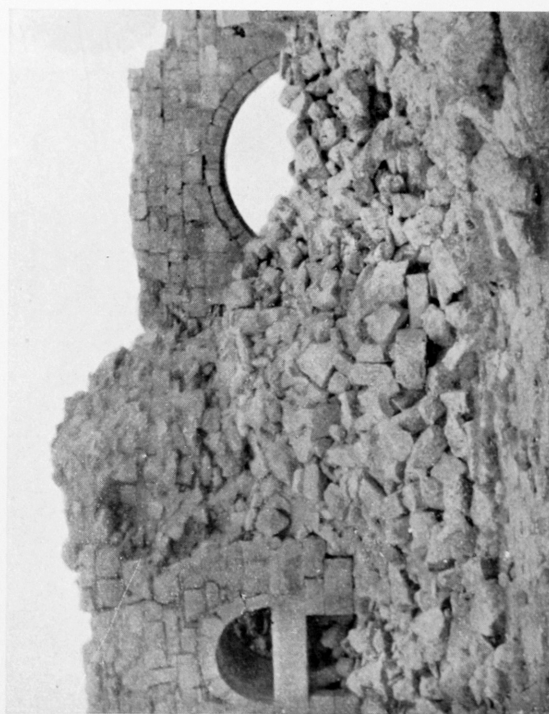
(2) ABDA : CASTLE FROM SOUTH, SEEN OVER RUINS OF UPPER TOWN.



(1) ABDA : TELL WITH GRAVES AND UPPER TOWN.



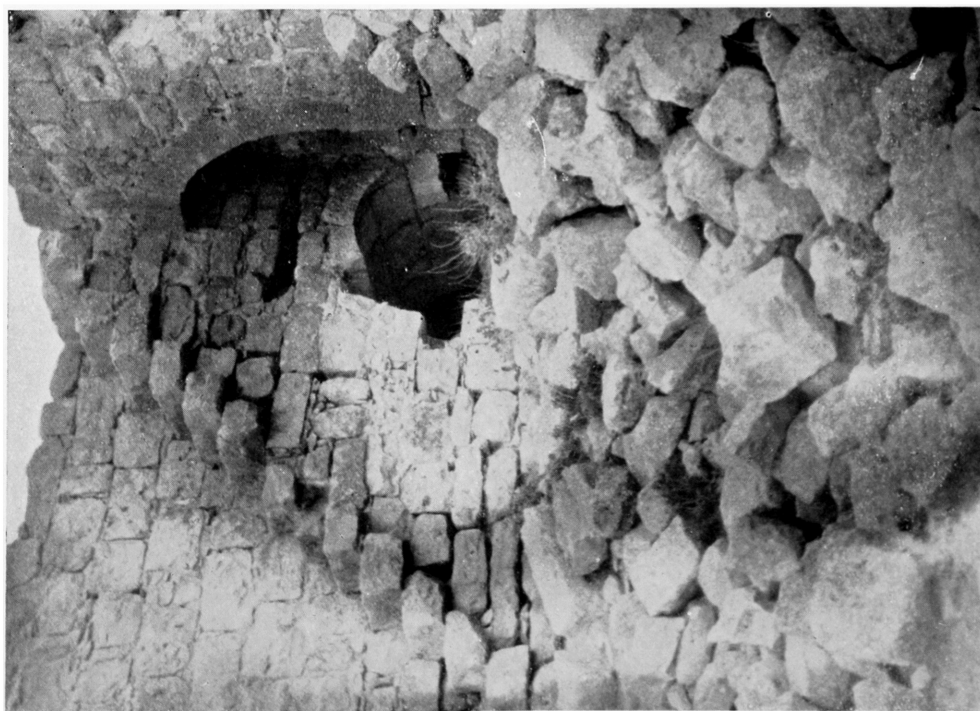
(4) ABDA : CAPITAL FROM NORTH CHURCH.



(3) ABDA : CASTLE, NORTH GATE AND TOWER DOOR.



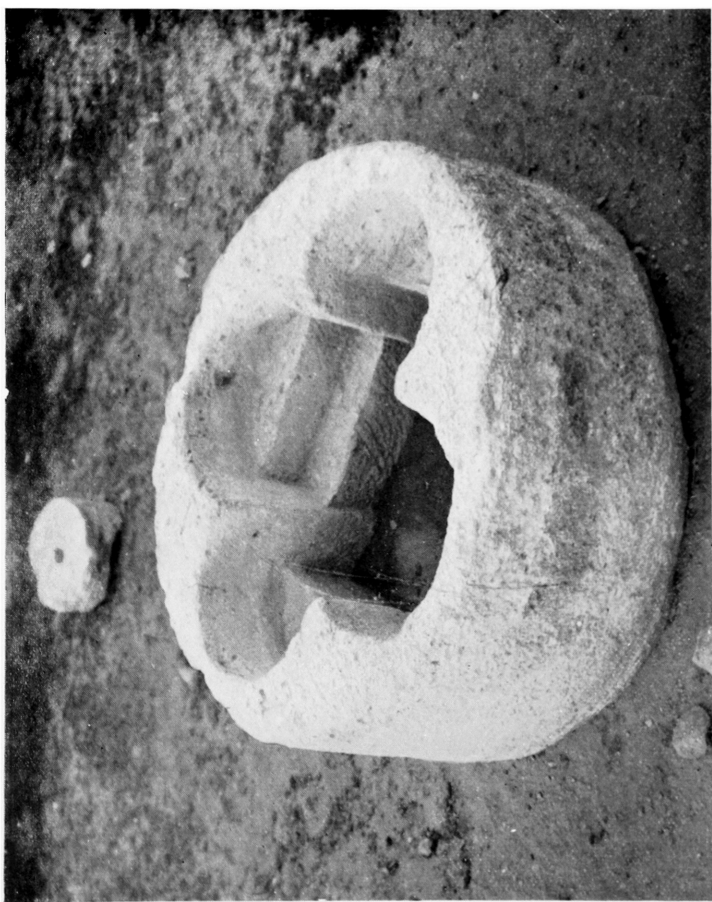
(2) ABDA : BATHS, DOMED ROOM.



(1) ABDA : CASTLE, SOUTH-EAST ANGLE.



(2) BEERSHEBA : STATUETTE.



(1) BEERSHEBA : FONT



(1) BEERSHEBA : INSCRIPTION.



(2) BEERSHEBA : BYZANTINE CAPITALS.



(1) RAHEIBA : FROM A CHURCH TOWER.



(2) RAHEIBA : RESERVOIR.



(1) EL AUJA : CASTLE FROM THE CHURCH.



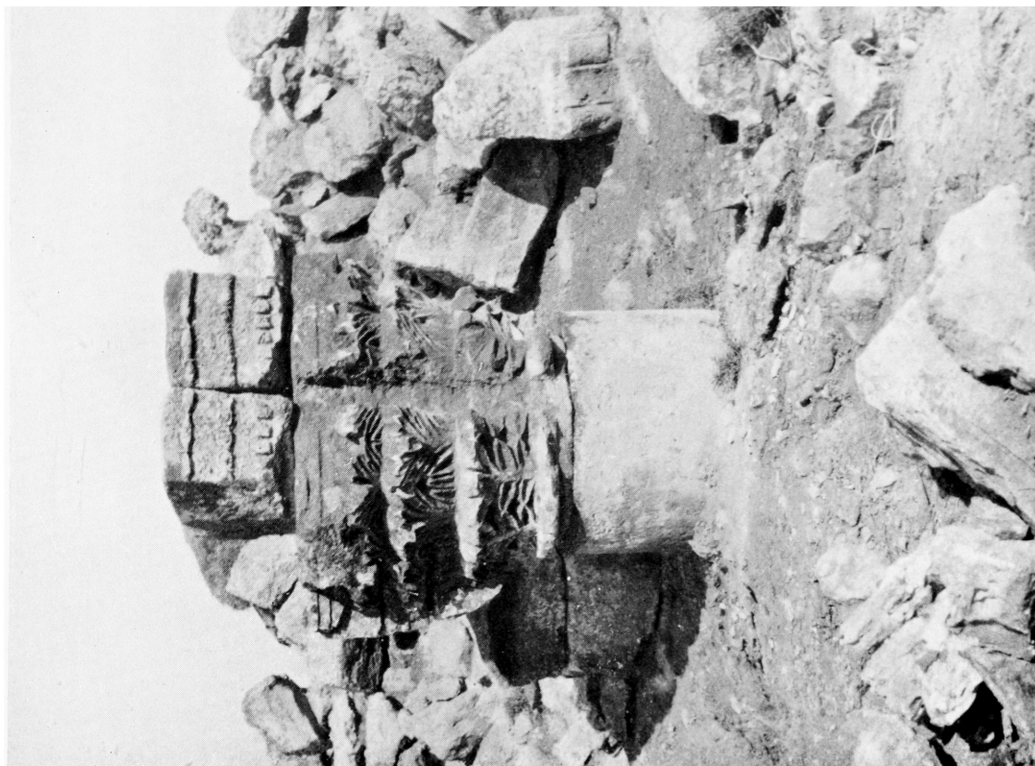
(2) EL AUJA : CHURCH.



(2) KURNUB: GREAT DAM.



(1) WADY KURNUB.



(2) KURNUB: CAPITAL AND VOUSOIRS OF WEST CHURCH.



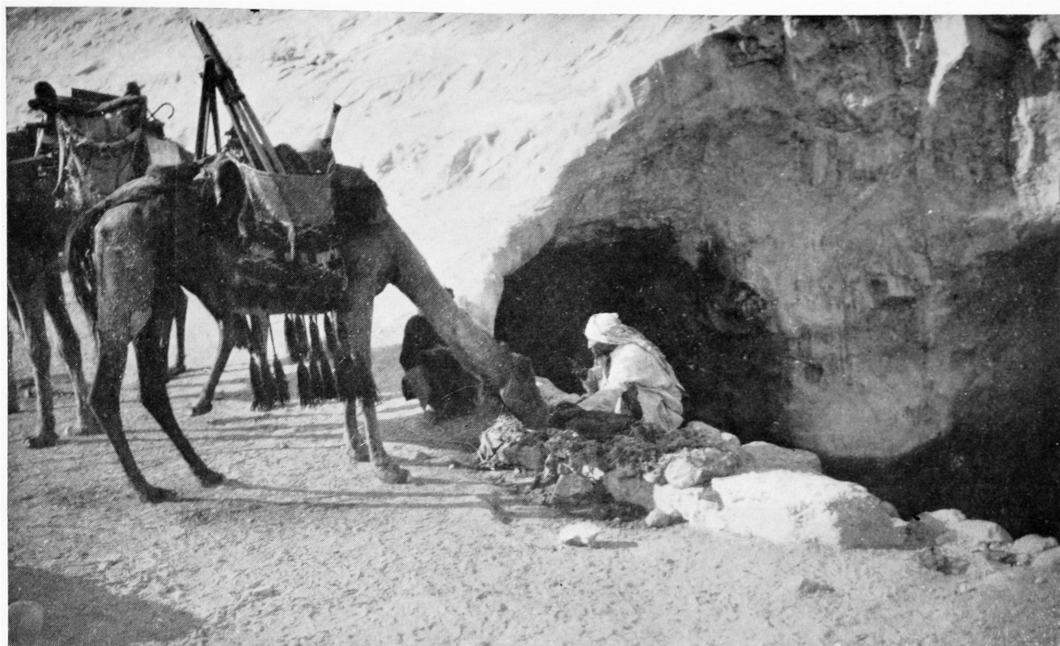
(1) KURNUB: TOWN AND WEST GOVERNMENT BUILDINGS.



(1) ROMAN BLOCKHOUSE BELOW NAGB EL SAFA (KURNUB-PETRA ROAD).



(2) NAGB EL SAFA.



(1) ROCK-CUT CISTERN IN WADY DEIRA.



(2) TYPICAL CHALK COUNTRY IN S. DESERT.

ΥΘΑΟΜΑΚΑΡΣ
ΡΟΔΙΑ^ΚΟΝΟCΚΑΤΕ
ΕΝΤΗΤΕ ΤΟΥ ΜΗ
ΠΕΛΛΕΟΥΙΝΔS
ΟΓΔΟΗC✝

F

1

ΕΥΤΥΧΩCΩΚΕ
ΔΟΜΗΘΗΥΠΟ
ΑΛΕΞΑΝΔΡΟΥ
ΚΑΙ ΒΟΗΘΟΥ
ΚΑΙ ΑΛΚΙΒΙΑΔ
ΥΙΩΝ ΔΙΑΚΟ
ΡΙΝΟΟΥΘΙΚΟΥ
ΕΤΕΙ ΡΑΣ

2
ΠΑΝΟΜΑΚΑΡΙΟΣ
ΖΟΝΑΙΝΟΣ ΕΡΠΟΓΛΥ
[ΗΝ] ΤΗΚΒΜΖΑΘΙΚΩ
ΙΝΔS Ζ ΕΤΟΥC ΤΜΒ
✝

3
ΤΑΗΜΑΚ
ΥΝΗΓΥΝ
ΟCΕΒCΕΘΤΙ
ΗΝS Δ: 8 ΙΝΔSΗ

3

4
✝ΕΝΘΑΔΕΚΑΤS
ΘΗΗΜΑΝΟΝΝΑ
ΗΔΙΑΚΜΔΑΙC
ΚΓΙΝΔSΑ

4

5
ΕΕΝΤ
ΤΑΗΠ
CΩCΑΝ

5

7
ΗCΑΟΥΔΩ

7

6
ΛΕΡΙΟΝΤ
ΚΙΜΟCΗ
ΜΗΤΙCΩΗ

6

9
ΣΤΟΥΤ
ΤΗC S ΙΝΔS
✝

9

8
✝ΕΝΘΑΔΗΚΑ
ΤΗΤSΟΜΑΚ^Κ

8

10
ΤΙΝΔΙ
ΤΕΤΕΘ

10

11
ΘΔΡΕΡ
ΟΥΔΑΔ
ΟΥCΔ
ΘΔΤΑΤ
ΝΙΝΟCΔ
ΕΠΡΟΝΔΚ
ΕΤΟΥCΤΚ

11

ΥΘΑΟΜΑΚΑΡΣ
ΡΟΔΙΑ^ΝΟΝΟΚΑΤΕ
ΕΝΤΗΤΕ ΤΟΥ ΜΗ
ΠΕΛΛΕΟΥΙΝΔΣ
ΟΓΔΟΗΣ ✕

F

1

ΕΥΤΥΧΩΣΩΚΕ
ΔΟΜΗΘΗΥΠΟ
ΑΛΕΞΑΝΔΡΟΥ
ΚΑΙ ΒΟΗΘΟΥ
ΚΑΙ ΑΛΚΙΒΙΑΔ
ΥΙΩΝ ΔΙΑΚΟ
ΡΙΘΟΥΟΥΚΟΥ
ΕΤΕΙ ΡΑΣ

2

ΠΑΝΟΜΑΚΑΡΙΟΣ
ΖΟΝΑΙΝΟΕΡΠΟΓΑ
ΕΝ ΤΗ ΚΒΜ ΖΑΝΘΙΚ
ΙΝΔΣ ΖΕΤΟΥΕΤΜΒ
✕

ΤΑΗΜΑΚ
ΥΝΗΓΥΝΗ
ΟΕΒΣΕΘΤΙ
ΗΝΣΔΙΔΙΝΔΣΗ

3

✕ΕΝΘΑΔΕΚΑΤΣ
ΘΗΗΜΑΝΟΝΝΑ
ΗΔΙΑΚΜΔΑΙΣ
ΚΓΙΝΔΣΑ

4

ΕΕΝΤ
ΤΑΗΤ
CΩCΑΝ

5

ΗCΑΟΥΔΩ

7

ΚΕΡΙΟΝΤ
ΚΙΜΟCΗ
ΜΗΤΙCΘΗ

6

ΣΤΟΥΤ
ΤΗΣΙΝΔΣ
✕

9

11

✕ΕΝΘΑΔΗΚΑ
ΤΗΤΣΟΜΑΚ

8

ΤΙΝΔΙ
ΕΤΕΘ

10

ΘΑΡΕΡ
ΟΥΔΑΔ
ΟΥCΔ
ΘΑΤ
ΝΙΝΟCΔ
ΕΠΡΟΝΔΚ
ΕΤΟΥΕΤΚ

†ΑΝΙΩΠΑΕΜΑ
ΚΑΡΙΟΥΙΩΑΝΝ
ΗC
ΒΟΝΗΟΥΞΙΝΕC
ΖΗΣΙΟΥΙΖΕΝΟC
ΚΤΟΝΟCΒΕΤΧC
ΥΙΔ

12

†ΑΝΗΠΑΗΟΜΑΚΑΡΙΟCΤΕ
ΦΑΝΟCΒΟΗΘΟΥΕΤΟΝΤΡΙΦ
ΚΟΝΤΑΤΡΙΟΗΕΝΜΕΝΠΑΦ
ΝΗΜΟΥΖΕΒΔΟΗΕΙΝΔCΘΕ
ΤΟΥCΥΚC†

13

14

✠ ✠ ✠
†ΑΝΕΠΑΗΟΜ
ΑΚΑΡΙΟCΕΡΑ
CΙΝΟCΕΜΕΝ
ΔΥCΤΡΟΥΗ
ΙΝΔ. ΙΓ.
†ΑΝΕΠΑΗΟΜ
ΑΚΑΡΙΟCΓΕ
ΟΡΓΙΟCΙΩΑΝ
ΝΟΕΠΑΓΟΜΕ
ΝΟΝΤΡΟΤΕΙΝΔC
✠

15

†ΑΝΕΠΑΠ
ΟC
ΟΡΑΚCΑΓ
CΥΝΑΤΗΟC
ΑΡΕΔΩΝΟC
CΕ

16

ΠΑΛΕΥΤΕCΕ
ΟCΝΑΓCΑΚ
ΡΑΛΑΦΜΕΑ
ΡΧCΟΝΑΙ

17

ΛΙΑΚΡΗΚ
ΙΡΒΕΡΙΠΙ
ΕΤΧΕ

†ΑΝΙΠΛΑΕΜΑ
ΚΑΡΙΟΥΙΩΑΝΝ
ΗC
ΒΟΝΗΟΥΞΙΝΕ
ΗCΙΟΥΙΖΕΝΟΕ
ΚΤΟΝΟCΒΕΤΧC
ΥΙΔ

12

†ΑΝΗΠΑΗΟΜΑΚΑΡΙΟCΤΕ
ΦΑΝΟCΒΟΗΘΟΥΕΤΟΝΤΡΙΦ
ΚΟΝΤΑΤΡΙΟΗΕΝΜΕΝΠΑ
ΝΗΜΟΥΖΕΒΔΟΗΕΙΝΔCΘΕ
ΤΟΥCΥΚC†

13

14

✠ ✠ ✠
†ΑΝΕΠΑΗΟΜ
ΑΚΑΡΙΟCΕΡΑ
CΙΝΟCΕΜΕΝ
ΔΥCΤΡΟVΙΗ
ΙΝΔ, ΙΓ.
†ΑΝΕΠΑΗΟΜ
ΑΚΑΡΙΟCΓΕ
ΟΡΓΙΟCΙΩΑΝ
ΝΟΕΠΑΓΟΜΕ
ΝΟΝΤΡΟΤΕΙΝΔC
✠

15

†ΑΝΕΠΑΠ
ΟC
ΟΡΑΚΑΓ
ΣΥΝΑΠΝΟC
ΑΡΕΔΩΝΟC
Ε

16

†ΠΑΕΥΤΕCΕ
ΟCΝΑΓΕΙΑΚ
ΡΑΛΑΦΜΕΑ
ΡΧΕΟΝΑΙ

17

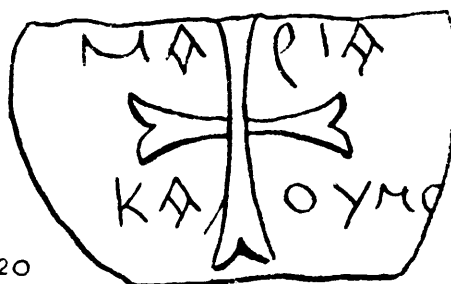
ΛΙΑΚΡΝΚ
ΙΡΒΕΡΙΓΙΝ
ΕΤΧΕ



18



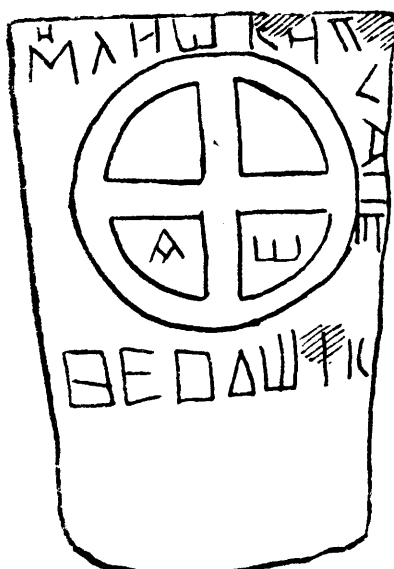
19



20



21



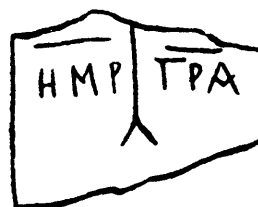
22



23



24



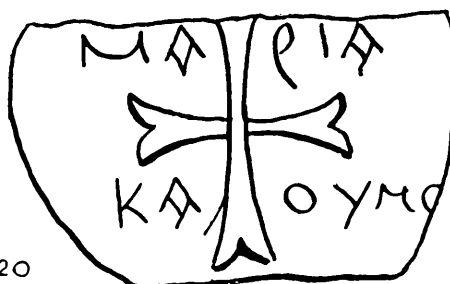
25



18



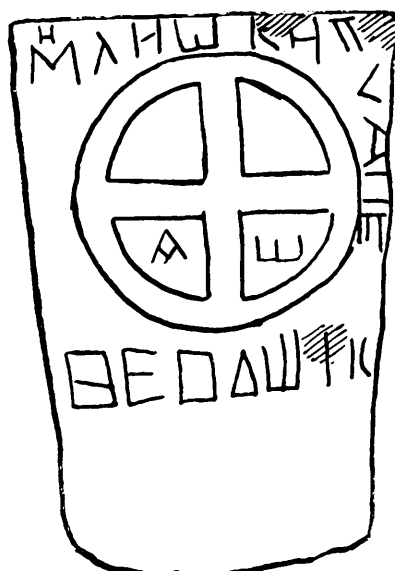
19



20



21



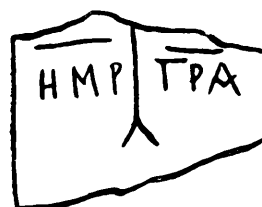
22



23



24



25



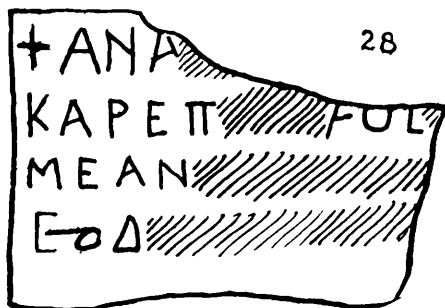
26



27



29



28



30



31



33



32

INDEX.

- Abda, 9, 15, 25, 28, 31, 33, 66, 73, 80.
 „ architectural and other remains, 93-107.
 „ churches, ruins of, 100.
 „ fortress, 93, 103, 119.
 „ inscriptions at, 28, 103, 106, 143, 144.
 „ high place, 28, 95.
 „ houses and baths, 105.
 „ Nabatean temple, 28, 95.
 „ „ rock tomb, 100.
 „ Roman camp, 99.
 Abimelech, 40.
 Abu Irgeig, 45.
 Abulfeda, 132.
 Ad Dianam, site of, 13.
 Agriculture, ancient and modern methods and
 conditions, 17, 36, 121.
 „ Byzantine, 32.
 Agrud, 11.
 Ahmed ibn Touloun, 12.
 Aila, 12, 31, 128-130.
 Ain Deffiyeh, 13.
 Ain Gattar, 99.
 Ain Ghadian, 13, 107.
 Ain Gharandel, 14.
 Ain el Guderat, 17, 57, 59, 70.
 „ „ „ Arab and Byzantine remains,
 62.
 „ „ „ fortress, 27, 64, 68, 71.
 „ „ „ graves at, 26.
 „ „ „ Roman remains, 64.
 Ain Kadeis, 7, 10, 15, 25, 52.
 „ „ and Kadesh, 70.
 „ „ Trumbull's description of, 54.
 Ain Kossaima, 57.
 Ain Muweilleh, 26, 27, 58.
 Ain Weiba, 99, 123.
 Akaba, 7, 10, 12, 28.
 „ Gulf of, 12.
 „ fortress at, 128.
 „ Byzantine and early Arabic relics at,
 129.
 Amaury of Jerusalem, 37.
 Antoninus of Placentia, 4n., 32, 110.
 Aqueducts, 60.
 Arab conquest, the, 37.
 „ tribes, 15, 63.
 Araba (*see* Wady Araba).
 Arad, 91.
 Araif el Naga, 11.
 Architectural remains at Abda, 100.
 „ „ Beersheba, 107.
 „ „ Esbeita, 73, 80.
 „ „ Khalasa, 108.
 „ „ Kurnub, 126.
 „ „ Raheiba, 113.
 „ „ Saadi, 112.
 Aretas II., King, inscription of, 29, 109,
 146.
 Askelon, 91.
 Baibars, Sultan, 38, 40.
 Baths, 105, 116.
 Beda, 11.
 Bedr, 12.
 Beersheba, 4, 30, 40, 46, 121.
 „ church ruins, 108.

- Beersheba, Greek inscriptions at, 107, 121, 134, 135.
 „ old font, 108.
 Bir Birein, 7, 35, 42, 44.
 „ ancient forts, 28.
 Bir el Hafir, 8, 35, 71.
 Bir el Hammam, 9.
 Bir el Seba (*see* Beersheba).
 Bir Mayein, 11, 71.
 Bir Rakhama, 9, 25.
 Birosabon, 107 (*see* Beersheba).
 Blockhouses at Abda, 107.
 „ „ Bir Birein, 42.
 „ „ Kurnub, 123, 126.
 „ „ Raheiba, 40.
 Boundary stone heaps, 23.
 Bronze Age, 44.
 „ fragments, 24.
 Byzantine agriculture, 32, 36, 121.
 „ rule, fall of the, 37.
 „ fortresses, 30.
 „ monasteries, 31.
 „ period, 29.
 „ „ summary of the, 36.
 „ pottery, 4, 9, 42.
 „ reservoirs, 42, 60.
 „ terraces and hedges, 36, 43.
 „ trade, 30.
 „ water supply and wells, 34, 35, 125.
 Cave dwellings, 9, 32, 69, 99, 106.
 Carchemish, 3, 48.
 Christian remains, 5, 31, 55, 61, 69, 80, 129.
 Church at Beersheba, 108.
 „ „ El Auja, 119.
 „ „ Mishrafa, 92.
 „ „ Tell el Sawa, 47.
 Churches at Abda, 100.
 „ „ Esbeita, 75, 80.
 „ „ Kurnub, 126.
 „ „ Raheiba, 115, 116.
 Climate of the South Country, 17.
 Coin of Constantine and Arcadius, 110.
 Coins, 46.
 „ Arab, at Khalasa, 110.
 Cowley, Dr. A. E., 145.
 Crusades and the South Country, 37.
 „ Road of the, 39.
 Darb el Shur, 5, 7, 39, 71.
 Darb el Sultan, 71, 99, 123.
 Eboda, 28, 97, 104 (*see* Abda).
 Edom, boundaries of, 70.
 „ King of, Moses' letter to, 71.
 Egypt, 18, 27.
 Elath, 28, 71, 130.
 El Auja, 5, 20, 25, 31, 33, 41, 93.
 „ churches, 119, 120.
 „ fortress and other ruins, 117.
 „ inscription at, 121.
 „ monastery, 120.
 „ ring graves, 26.
 „ scanty rainfall of, 121.
 „ well, 35, 121.
 El Deir, 130.
 El Kasr el Raheiba, 28, 40.
 Elusa, 28, 110 (*see* Khalasa).
 Esbeita, 4, 5, 25.
 „ architectural details, 80.
 „ Byzantine town of, 73.
 „ churches, 31, 75, 80.
 „ cisterns at, 34, 73.
 „ evidence of final destruction of, 90.
 „ monastery, 84.
 „ situation of, 72.
 Ezion-Geber, 13, 28, 70.
 Faik, 12.
 Fertility of South Country, 16, 18.
 Flints at Ain el Guderat, 67.
 „ and Stone Age, 19, 20.
 „ worked, and natural formations, 19, 113.
 Floods, 16.
 Font at Beersheba, 108.
 Foothills, 57.
 Fortress at Abda, 93, 103.
 „ „ Ain el Guderat, 65, 68.

- Fortress at Akaba, 128.
 „ „ El Auja, 117.
 „ „ Geziret Faraun, 130.
 „ „ Khalasa, 111.
 „ „ Kurnub, 122.
 „ „ Tell Milah, 50.
- Gaza, 9, 25, 29, 37, 63, 91, 110, 134.
 Geziret Faraun, ruins on, 130.
 Ghassanids, the, 31.
 Graffito (*see* Inscriptions).
 Grain stores, 35.
 Graves, 25.
 „ at Kossaima, 23, 68.
 „ modern Arab, 25.
 „ rectangular, 21.
 „ ring, 21.
 „ at Ain el Guderat, 68.
 „ at Wady el Seram, 24.
 Gray, Rev. Dr. G. B., 133.
 Graye, xiii, 130.
- Haroun ibn Koumarouwaih, 12.
 Hauser, Rev. Caleb, 68.
 Hedjaz railway, 14.
 Heraclius, 37.
 Holland, Rev. F. W., 18, 39, 44.
 Hora, pottery at, 48.
 Hormah, identification question, 90.
 Houses, Byzantine at Esbeita, details of, 75.
 Huntington, Prof. E., 33, 114, 117, 121.
- Ibrahim Pasha, 12, 128.
 Imshash el Milah, 50.
 Inscription, Arabic, of Kansuh el Ghuri, 12, 147.
 „ Greek, at Abda, 103, 143.
 „ „ graffito at Abda, 106, 143, 144.
 „ „ at Beersheba (Bir el Seba), 107, 121, 134, 135.
 „ „ at Esbeita, 89.
 „ „ from house of Saliba 'Awad at Gaza, 134.
- Inscription, Greek, at Khalasa, 109, 111, 135, 138.
 „ „ mosaic at El Auja, 121.
 „ „ at Raheiba (Rehoboth), 116, 143, 145.
 „ Nabatean, at Abda, 28.
 „ „ „ Khalasa, 29, 109, 145.
- Irrigation dams at Kurnub, 125.
 Israel, the Children of, 70.
- Jaussen, Rev. Père A., 95.
 Jebel Aneiga, 11.
 Jebel Araif el Naga, 11.
 Jebel el Ain, 52, 60.
 Jebel Harun, 14, 20, 71.
 Jebel Magrath, 32.
 Jebel Mushrag, 44, 58.
 Jebel Muweilleh, 40, 52, 57.
 „ „ graves on, 25.
 „ „ stone piles on, 22.
 Jebel um Hashim, 8, 11, 52.
 Jebel Welal, 44.
 Jebel Yelleg, 44.
 Jennings-Bramley, Capt. A. W., 66.
 Justinian's defensive works, 31.
- Kadesh-Barnea, 37, 53.
 „ „ identification question, 69.
 Kansuh al-Ghuri, Sultan, inscription of, 12, 147.
 Khalasa, 4, 28-31, 33, 40, 97, 99, 121.
 „ cairns and pottery at, 25.
 „ ancient silk industry of, 112.
 „ forts at, 111.
 „ inscriptions at, 29, 109, 111, 135, 138, 145.
 „ ruins of, 108.
 „ wells of, 35.
- Khoraisha, 34.
 Khirbet el Imshash, 9.
 Khirbet Hora, 46, 48.
 Khirbet Watan, 9, 47.
 Kitchener, Lord, views on cairns, 19.

- Knesevich, Mr. A. A., 3.
 Kossaima, 7, 10, 28, 58, 70.
 ,, antiquities of, 62.
 ,, graves at, 23, 68.
 ,, pottery from, 23.
 Kuntilla, 10, 11, 37.
 Kurnub, 31, 73.
 ,, churches, ruins of, 123, 126.
 ,, the irrigation dams, 32, 125.
 ,, fortress, 119, 122.
 ,, town and blockhouses, 123.

 Laborde, Léon de, 132.

 Maan, 14.
 Macalister, Prof. R. A. S., 41.
 Madeba, mosaic map, 109.
 "Makatal," or dead man's piles, 22, 27.
 Makkelath, 68.
 Malatha or Malis, 122.
 Margoliouth, Prof. D. S., 147.
 Mayein (*see* Bir Mayein).
 Mishrafa, 5, 31, 72, 90.
 ,, Byzantine ruins of, 91.
 ,, churches and houses at, 92.
 Mohaila, 69 (*see* Muweilleh).
 Mohammed ibn Kelaoun, 12.
 Monasteries, 31.
 Monastery, ruins of, at El Auja, 120.
 ,, " " " " Esbeita, 84.
 ,, " " " " Raheiba, 115.
 Mosaic inscription at El Auja, 121.
 Moses, 70.
 Mount Hor, the traditional, 71.
 Musil, Dr., xiii, 13n., 54n., 92n.
 Muweilleh, 7, 18, 33, 38, 44, 69, 70.
 ,, ruins of, 26, 27, 68.
 ,, stone heaps, 18.

 Nabatean inscription at Khalasa, 29, 109, 145.
 ,, period, 28.
 ,, rock tomb at Abda, 100.
 ,, temple remains at Abda, 95.
 Napoleon and Sinai, 38.

 Nagb el Akaba, 11.
 ,, " " Arabic inscription in the, 147.
 Nagb el Gharib, 9, 99, 123.
 Nagb el Safa, 107, 123.
 Newcombe, Capt. S. F., xv, 1, 2.
 Northern Plain, the, 57.
 Notitiae Dignitatum, 122.

 Obodas, cult of, 95, 97.
 Ouranios, 97.

 Painting, tempera, 89, 106.
 Palmer, Prof. E. H., *Researches of*, xiv, 18,
 53, 69, 90, 95, 117, 119.
 Patriarchs, roads of the, 39.
 Pentateuch, the, and Kadesh, 69.
 Persian aggression in South Country, 31.
 Petra, 28, 29, 99, 123.
 Pottery, Arabic, 43, 45, 48, 128, 129.
 ,, Byzantine, 4, 9, 13, 25, 42, 43, 45, 47,
 48, 50, 51, 55, 63, 90, 129, 132.
 ,, Canaanite, 24, 45.
 ,, Cypriote, 67.
 ,, Hellenistic, 45, 95,
 ,, Roman, 8, 47, 64.
 ,, Seleucid, 46.
 ,, Semitic, 2nd, 3rd and 4th periods, 24,
 41, 46, 47, 48, 50, 51, 67, 97.

 Quietus, coin of, 46.

 Raheiba, 4, 30, 40, 41, 44, 113.
 ,, ancient forts at, 28.
 ,, Greek inscription, 116, 143, 145.
 ,, ruins of, 113-117.
 ,, well, 35, 41, 116.
 Rainfall of the South Country, 16, 17, 32, 121.
 Ras el Aziz, 8.
 Ras Seram, 7, 43, 62, 68.
 ,, stone circles at, 18.
 ,, tomb at, 21.
 Rehoboth, identification of, 41, 117.
 Renaud of Chatillon, 38.

- Reservoirs, Byzantine, 34, 42, 60, 73.
 Ritual heaps, 22.
 Roads across the South Desert, 12, 13, 18, 37, 39, 71, 122.
 Roman stations, 69, 99.
 „ architecture, 97.
 Rowlands, Rev. John, 53, 90.
- Saadi, 4, 111-113, 139-142.
 Sahala, 99.
 Saladin, 37.
 Sandal marks, 22.
 Savignac, Rev. Père M., 95, 132.
 Sheep pens, 22.
 "Shehadet" memorial heaps, 22.
 Shelters, round and rectangular stone, 22.
 Silk trade of Khalasa, 30, 112.
 Southern Plain, conformation of the, 52.
 Stein, Sir Aurel, 8.
 Stephen of Byzantium, 97.
 Sterling, Dr., 3.
 Stone Age, 18, 20, 27, 33.
 Stone monuments, rude, 18, 20-27.
 Stone of the Desert, the, 15.
- Taba, 130.
 Tabula Peutingeriana, 97, 99, 104, 109, 121.
 Tamarisk hedges, 11, 17, 36, 40.
 Tell abu Hareira, 4, 45.
 Tell Ain el Guderat, 33, 44, 61, 64.
 „ the fortress, 64, 68.
 Tell Gatun, Byzantine farms at, 8.
 Tell el Kasr el Raheiba, 28, 114.
 Tell el Milah, 9, 49, 51, 122.
 „ ring graves at, 26.
 Tell el Sawa, 9, 31, 47, 93.
 Tell el Seba, 45, 46, 108 (*see* Beersheba).
 Tell el Seram, 5, 121.
 „ flints and Byzantine pottery at, 19.
 Tell Fara, 4.
 Tell Jemme, 4.
 Tell Kurnub, 9, 121.
- Tell Kurnub, ring graves at, 26.
 „ (*see* Kurnub).
 Tell Rakhama, 9.
 Tells, the Northern, 44.
 Terraces and hedges, 36.
 Thamara, 121 (*see* Tell Kurnub).
 Thebaid, 73.
 Themed, 37, 38.
 Tombs, chamber, 21.
 Trade, Byzantine, 30.
 Transfiguration, a painting of the, 89.
 Trees of the Negeb, 17.
 Trumbull, Mr. H. C., 53.
 Turkish blockhouses, 107.
- Um Deifi, 9, 122.
 Umrashash, 130.
- Vegetation of the Negeb, or South Desert, 17.
 Vincent, Père H., 95.
- Wady abu Irgeig, 45.
 Wady abu Ruta, 42.
 Wady Araba, 7, 11, 12, 14, 99, 122, 123.
 „ fertility of the, 13.
 „ stone of the, 16.
 Wady Ain el Guderat, 7, 44, 59.
 „ flints from, 19.
 „ graves at, 24, 68.
 „ pottery at, 24.
 „ (*see* Ain el Guderat).
 Wady Ain Kadeis, 53, 56, 57.
 „ (*see* Ain Kadeis).
 Wady el Abiad, 5, 24, 26, 41, 72.
 Wady el Ain, 7, 57, 59, 62.
 Wady el Arish, 44.
 Wady el Gatun, 8.
 Wady el Hafir, 5, 8, 32, 42, 117, 121.
 Wady el Masri, 12.
 Wady el Seram, cairns and stone circles at, 24.
 Wady el Sidd, 9, 122.
 Wady Figra, 107, 123.
 Wady Geraia, 11.

Wady Ghadian, 13.
 Wady Gharandel, 14.
 Wady Ghazza, 45.
 Wady Jerafi, 71.
 Wady Khoraisha, 7.
 Wady Kurnub, 122.
 Wady Lussan, 10, 11, 20, 71.
 „ stone heaps, 23.
 Wady Mayein, 11.
 Wady Merzaba, 99.
 Wady Mezra, 11.
 Wady Migrih, 5, 11, 72, 92.
 Wady Murra, 9, 93, 99, 123.

Wady Musa, 14.
 Wady Ramliya, 8, 9, 93, 125.
 Wady Sharia, 4.
 Wady Themail, 73.
 Wady Zeyatin, 72, 80.
 Watercourses of the Desert, 16.
 Water supply, Byzantine, 34.
 Wells, 35, 116, 121.
 Wood, scarcity of, 34, 77.
 Yusuf Canaan, 3.
 Zephath, identification question, 90.

PUBLICATIONS OF THE PALESTINE EXPLORATION FUND.

*Second-hand Copies of Books and Maps marked "Out of Print" may be had by
Application to the Secretary.*

BOOKS.

- 1.—THE QUARTERLY STATEMENT. A Journal of Palestine Research and Discovery. Issued free to Subscribers. Single numbers 2s. 6d. For back numbers apply to the Secretary, 2, Hinde Street, Manchester Square, W. Cases for binding, in yearly vols., in Green or Chocolate, 1s. each.
- 2.—INDEX TO THE QUARTERLY STATEMENTS, 1869–1892 inclusive. 3s. Index from 1893–1910 inclusive. 5s. (Unbound, 3s. 6d.)
- 3.—THE SURVEY OF WESTERN PALESTINE. 4to. Seven Volumes and Index, as under: Memoirs, 3 vols.; Special Papers; Name Lists; Jerusalem Volume and Portfolio of Plates; Fauna and Flora, by Canon TRISTRAM. (*Note*.—"Fauna and Flora," by Canon TRISTRAM, LL.D., D.D., F.R.S., can be purchased separately. Price £3 3s.)
- 4.—THE SURVEY OF EASTERN PALESTINE. (One Volume.) By Colonel CONDER, LL.D., M.R.A.S., R.E. £3 3s.
- 5.—ARCHÆOLOGICAL RESEARCHES. (Two Volumes 4to, profusely Illustrated.) By Prof. CLERMONT-GANNEAU, LL.D. Vol. I, Jerusalem and its Vicinity; Vol. II, Investigations in Southern Palestine. £5 5s.
- 6.—THE FAUNA AND FLORA OF SINAI, PETRA, AND THE WÂDY 'ARABAH. (One Volume, richly Illustrated.) By H. CHICHESTER HART. £2 2s.
- 7.—THE GEOLOGY OF PALESTINE AND ARABIA PETRÆA. By Prof. E. HULL, LL.D., F.R.S., F.G.S. Uniform with Nos. 3 to 8. 21s. *Out of print*.
- 8.—ACROSS THE JORDAN. By G. SCHUMACHER, C.E. 6s. 8vo. *Out of print*.
- 9.—THE JAULAN. By G. SCHUMACHER. With Map, Plans and Illustrations. 6s.
- 10.—ABILA, PELLA, AND NORTHERN 'AJLUN. By G. SCHUMACHER. 6s.
- 11.—LACHISH. By Prof. FLINDERS PETRIE, Litt.D., LL.D. 10s. 6d. *Out of print*.
- 12.—A MOUND OF MANY CITIES (Lachish). By F. J. BLISS, M.A., Ph.D. With numerous Illustrations. 6s.
- 13.—EXCAVATIONS AT JERUSALEM, 1894–1897. With Plans and Illustrations. By F. J. BLISS, M.A., Ph.D., and A. C. DICKIE, A.R.I.B.A. 12s. 6d.
- 14.—EXCAVATIONS IN PALESTINE, 1898–1900. (Profusely Illustrated.) By F. J. BLISS, M.A., Ph.D., R. A. S. MACALISTER, M.A., F.S.A., and Prof. WÜNSCH. 4to. £2 10s.
- 15.—THIRTY YEARS' WORK: A Memoir of the work of the Society. By Sir WALTER BESANT. 3s. 6d.
- 16.—JERUSALEM, THE CITY OF HEROD AND SALADIN. By Sir WALTER BESANT and Prof. E. H. PALMER. St. Martin's Library Edition. 2s. cloth, 3s. leather, net.
- 17.—PALESTINE, UNDER THE MOSLEMS. By GUY LE STRANGE. With Map and Illustrations. 16s.
- 18.—TENT WORK IN PALESTINE. By Colonel CONDER. 6s. *Out of print*.
- 19.—HETH AND MOAB. By Colonel CONDER. 6s. *Out of print*.

PUBLICATIONS OF THE PALESTINE FUND—*continued.*

- 20.—JUDAS MACCABÆUS. By Colonel CONDER. 4s. 6d. *A Reprint.*
 - 21.—THE LATIN KINGDOM OF JERUSALEM, A.D. 1099 to 1291. By Colonel C. R. CONDER. 7s. 6d.
 - 22.—SYRIAN STONE LORE. By Colonel CONDER. 6s. New Edition.
 - 23.—THE TELL AMARNA TABLETS, including the tablet found at Lachish. Translated by Colonel C. R. CONDER. 5s. 2nd Edition. *Out of print.*
 - 24.—MOUNT SEIR. By Prof. E. HULL. 6s. *Out of print.*
 - 25.—NAMES AND PLACES IN THE OLD AND NEW TESTAMENTS AND APOCRYPHA, with references to Josephus, and identifications. By GEORGE ARMSTRONG. 6s. *A Reprint.*
 - 26.—THE BIBLE AND MODERN DISCOVERIES. By HENRY A. HARPER. 7s. 6d. 5th Edition.
 - 27.—THE CITY AND THE LAND. Seven Lectures on Palestine. Single Lecture, 1s.; the Volume, 3s. 6d. 2nd Edition.
 - 28.—THE LIFE OF SALADIN. By BEHA ED DIN (A.D. 1137-1193). Translated and Annotated by Colonel CONDER, with a preface and notes by Major-General Sir CHARLES WILSON. 9s.
 - 29.—THE ANCIENT CUBIT AND OUR WEIGHTS AND MEASURES. By Lieut.-General Sir CHARLES WARREN, K.C.B. 5s. 6d.
 - 30.—PAINTED TOMBS AT MARISSA (MARÉSHAH). By the Rev. J. P. PETERS, D.D. (New York), and Dr. HERMANN THIERSCH (Munich). 4to, in cloth, £2 2s.
 - 31.—METEOROLOGICAL OBSERVATIONS AT JERUSALEM. With Tables and Diagrams. By JAMES GLAISHER, F.R.S. In paper covers, 2s. 6d.
 - 32.—GOLGOTHA AND THE HOLY SEPULCHRE. With Plan of Jerusalem and Illustrations. By Major-General Sir CHARLES W. WILSON, K.C.B., K.C.M.G., F.R.S., D.C.L., LL.D., &c. Demy 8vo. Price 6s.
 - 33.—AN ARABIC ASTROLOGICAL TREATISE. By a Jerusalem Christian native. Translated and annotated by Miss GLADYS DICKSON. Price 1s.
 - 34.—AN OLD HEBREW CALENDAR-INSRIPTION FROM GEZER.—With facsimile. By Prof. LIDZBARSKI, the Rev. G. B. GRAY, D.D., D.Litt., and Mr. E. J. PILCHER. Reprinted from the *Quarterly Statement*, Jan. 1909. Price 1s.
 - 35.—THE EXCAVATION OF GEZER, 1902-5 AND 1907-9. By Prof. R. A. STEWART MACALISTER, M.A., F.S.A. With Illustrations. 3 Vols. 4to. £4 4s.
 - 36.—A TABLE OF CHRISTIAN AND THE MOHAMMEDAN ERAS. From July 15th, A.D. 622, the date of the Hejira, to A.D. 1900. By the Rev. J. E. H. HANAUER. (Pamphlet.) Price 7d.
 - 37.—PALESTINE PILGRIMS' TEXT SOCIETY'S LIBRARY.—This valuable collection of early descriptions of the Holy Places, and of the topography of Palestine, published by the Palestine Exploration Fund, in 13 vols., royal 8vo, bound in cloth. The complete set, £10 10s. A catalogue, giving full details, free on application.
 - 38.—THE ANNUAL Publication giving full reports of Excavations in progress—commencing 1911—price 21s. Issued free to all subscribers of 21s. and upwards. Contains an account of the excavations at AIN SHEMS (BETH SHEMESH) during 1911, and of investigations carried out at RABBATH AMMON, and PETRA.
 - 39.—ANNUAL No. 2. Double number for the years 1912-13, price 31s. 6d. Contains a full report of the excavations at AIN SHEMS (BETH SHEMESH) during 1912.
 - 40.—ANNUAL No. 3. Double number for the years 1914-15, price 45s. THE WILDERNESS OF ZIN: The complete archæological report of the SURVEY OF THE NEGEB AND N.E. SINAI carried out during 1914.
-

MAPS AND PLANS.

- 1.—THE GREAT MAP OF WESTERN PALESTINE, with modern names only. (In 26 sheets, with portfolio ; Scale, 1 inch = 1 mile.) £3 3s.
- 2.—MAP OF PALESTINE, with modern names only. In 20 sheets. Scale, $\frac{3}{8}$ of an inch = 1 mile. Including both sides of the Jordan, and extending from Baalbek in the north to Kadesh Barnea in the south. £1 10s. *Out of print.*
- 3.—MAP OF PALESTINE, with modern names only. In 12 sheets. Scale, $\frac{3}{8}$ of an inch = 1 mile. 17s. 6d. *Out of print.*
- 4.—OLD AND NEW TESTAMENT MAP OF PALESTINE in 20 sheets. Scale, $\frac{3}{8}$ of an inch = 1 mile. £1 10s.
- 5.—OLD AND NEW TESTAMENT MAP OF PALESTINE in 12 sheets. Scale, $\frac{3}{8}$ of an inch = 1 mile. 17s. 6d.
- 6.—MAP OF WESTERN PALESTINE, showing WATER BASINS IN COLOUR, AND 5 VERTICAL SECTIONS. In 6 sheets. Scale, $2\frac{3}{4}$ miles = 1 inch. 13s. *Out of print.*
- 7.—THE SECTIONS of the Country north and south, and east and west, on 2 sheets. 2s. (Western Palestine only.)
- 8.—PLAN OF JERUSALEM (reduced from the Ordnance Survey Plan), showing in red the latest discoveries, with separate list of references. 1s. 6d. ; mounted on cloth, 2s. 6d.
- 9.—PHOTO-RELIEF MAP OF PALESTINE. Scale, 5 miles to the inch. 6s. 9d., unmounted ; mounted on cloth, roller, and varnished, 10s. 6d. Size mounted, 30 inches by 52 inches.
- 10.—PHOTO-RELIEF MAP OF PALESTINE (Small). Size, 25 inches by 13 inches. 2s. 9d. unmounted.
- 11.—NEW MAP OF THE "DESERT OF THE WANDERINGS," from Mount Hor on the East to the Suez Canal on the West, and from Mount Sinai in the South to Beersheba in the North. Compiled by the War Office, and based principally upon the sketch Surveys of the Palestine Exploration Fund. Scale, 4 miles to the inch. In eight sheets. Price 1s. 6d. per sheet. The Complete Map, mounted on linen, and with a few of the scriptural sites inserted in red by hand, 21s.

All maps can be had mounted on rollers for hanging, or on cloth and folded.

MODELS AND CASTS.

- 1.—RAISED MAP OF PALESTINE. (Constructed from the Surveys of the Palestine Exploration Fund by G. ARMSTRONG.) Scale, $\frac{3}{8}$ of an inch = 1 mile (the same as Map No. 4). Casts in fibrous plaster, coloured and framed. £13 13s. The map measures 7 feet 9 $\frac{1}{2}$ inches by 4 feet 1 $\frac{1}{2}$ inches.
- 2.—SMALL RAISED MAP OF PALESTINE. (Constructed by G. ARMSTRONG.) Scale, $6\frac{1}{4}$ miles to an inch. Casts in fibrous plaster, coloured and framed. £6 6s. The map measures 42 inches by 32 inches.
Both maps are on view at the office of the Fund, 2, Hinde St., Manchester Sq., W.
- 3.—RAISED CONTOUR MAP OF JERUSALEM AND ENVIRONS. Scale $\frac{1}{33000}$, with the ancient walls discovered on Eastern and Western Hills marked in red. Price £3 3s. Map measures 5 feet by 4 feet 3 inches.
- 4.—RAISED CONTOUR MAP OF JERUSALEM to smaller scale ($\frac{1}{100000}$) without indication of Ancient Walls. 19 inches by 19 inches. Price 25s.
- 5.—SEAL OF "HAGGAI, THE SON OF SHEBANIAH." Facsimiles of this Signet, in metal, 1s. each.

PUBLICATIONS OF THE PALESTINE FUND—*continued.*

- 6.—CASTS OF THE TABLET WITH CUNEIFORM INSCRIPTION FOUND AT LACHISH. 2s. 6d. each.
- 7.—CASTS OF THE ANCIENT HÆMATITE WEIGHT, brought by Dr. CHAPLIN from Samaria. 2s. 6d. each.
- 8.—CASTS OF INSCRIBED BEAD, referred to in p. 32, *Quarterly Statement*, 1893. 1s. each.
- 9.—CASTS OF THE SEAL FOUND ON OPHEL, referred to in p. 181, *Quarterly Statement*, 1897. 2s. 6d. each.
- 10.—CASTS OF THE SILOAM INSCRIPTION. £1 1s. each, framed.
- 11.—CASTS OF MOUNT SINAI. Small, Coloured, framed, and names written, 15s. Size, 9½ inches by 9¾ inches. Large, Coloured, framed, and names written, £1 15s. Size, 25 inches by 27 inches. Scale, 6 inches to the mile.
- 12.—CASTS OF THE INSCRIBED TABLETS FOUND IN THE EXCAVATIONS OF GEZER (*Quarterly Statement*, p. 229, 1904 ; p. 206, 1905). Price 1s. 6d. each.

PHOTOGRAPHS AND SLIDES.

PHOTOGRAPHS. A very large collection, 6½ in. by 8 in., unmounted, 10d. each ; A Catalogue of the Photographs, arranged alphabetically according to the Bible names of places, can be had on application.

Photos, with translations, of the inscription from Herod's Temple, of the Moabite Stone (restored), and of a facsimile of the Siloam Inscription ; also photo of the Jar found at the foundation of the S.E. corner of the wall of the Temple Area, 80 feet below the present surface. Sent to Subscribers for 7d. each, post free.

LANTERN SLIDES of the Bible places mentioned in the Catalogue of Photographs and Special List can be had on application at the Office. A large Assortment. Price 1s. each, uncoloured. 10s. per dozen.

LANTERN SLIDES of the Raised Map. Plain, 1s. 3d. ; coloured, 2s. 9d. each. Post free.

Branch Associations of the Bible Society, all Sunday Schools within the Sunday School Institute, the Sunday School Union, and the Wesleyan Sunday School Institute, will please observe that by a special Resolution of the Committee they are allowed to purchase the books, maps, etc. (by application to the Secretary only), at the reduced price.

Apply to the Secretary, Palestine Exploration Fund, 2, Hinde St., Manchester Sq., W., or, in the U.S.A., to the Hon. Gen. Secretary, 50, Forest Street, Hartford, Conn.

NOTE FOR SUBSCRIBERS.—*Subscribers of a Guinea (or, in America, of \$5.0) and upwards can purchase most of the Books or Maps at a considerable reduction upon application to either Secretary, as above.*

